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# LIGHTER STUDIES OF A COUNTRY RECTOR



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OF A

## COUNTRY RECTOR

BY

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AUTHOR OF "THE WILD FLOWERS OF SELBORNE," ETC.

Ad maiora avocatus, quae ob haec parerga negligi non decuit.

Jeremiah Horrocks.

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# From a Country Rectory

#### CHAPTER I

#### AN INTRODUCTION

CHARLES KINGSLEY once wrote a paper, in answer to the question of a supposed correspondent; as to how he contrived to support the monotonous life of a country parson in a remote and sequestered village. He was, he confessed, "a minute philosopher," not in the sense employed by Bishop Berkeley in his Alciphron, but as one contented with simple pleasures, and able to see in every blade of grass the whole miracle of nature. The moorland of Eversley was his wintergarden—far larger than the famous one at Chatsworth; one, too that cost him nothing, and containing materials of all possible physical science. The great fir plantation was his

cathedral—" red shafts, green roof, and here and there a pane of blue sky "-paved with rich brown fir needles: "a carpet at which Nature had been at work for forty years." The wild creatures of the parish, the foxes, the birds, the insects, were a constant source of interest to him-for were not they, too, his parishioners? The habitat of every rare plant in the neighbourhood was known to him. Among his friends he reckoned a family of natterjacks who lived on year by year in the same hole in the Rectory garden, a favourite slow-worm in the churchyard, and a pair of fly-catchers who built their nest every spring under his bedroom window. "You complain," he says, "that such a life, with such petty interests, is monotonous. I delight in that same monotony. It is pleasant and good to see the same trees year after year; the same birds coming back in spring to the same shrubs; the same banks covered with the same flowers. . . . If you rob me of my faith in 'minute philosophy,' you rob me of a continual source of content, surprise, delight."

In very much the same strain we are reminded by Emerson, in more than one of his Essays, of the steady and prodigal

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provision in nature that has been made for man's support and delight on this green ball which floats him through the universe.

> More servants wait on man Than he'll take notice of.

"What angels," he asks, "invented these splendid ornaments, these rich conveniences, this ocean of air above, this ocean of water beneath, this firmament of earth between? this zodiac of lights, this tent of dropping clouds, this striped coat of climates, this fourfold year? Beasts, fire, water, stones, and corn serve him. The field is at once his floor, his work-yard, his play-ground, his garden, and his bed. Give me," he exclaims, "health and a day, and I will make the pomp of emperors ridiculous."

It is this recognition of the beauty and interest of nature that redeems from monotony and dulness the most uneventful existence, and emboldens one to say with the Silurian poet—

If Eden be on earth at all, 'Tis that which we the country call.

Many a "country-liver" has found an unfailing source of refreshment and delight in the wild life of his neighbourhood. And if to

a love of nature be also added a love of literature, the charm of country retirement is complete. Charles Kingsley was not alone in utilizing the leisure moments of a busy life —for there is plenty to do in a country parish, where the parson, in addition to his more distinctive duties, is often lawyer, doctor, and general counsellor in one—in the companionship of old books, in literary research, or in the less ambitious task of contributing to the reviews and magazines. There is a potent charm in authorship, of however humble a character, which lends colour to the most uneventful career. The summer holiday, too, is invested with an additional interest when it becomes the source of some contribution to current literature. Not to travel beyond the limits of a single county, the country Parsonages of Hampshire have witnessed the production of more than one work of interest. The learned Dr. Peter Heylin, the friend and biographer of Archbishop Laud, and the author of a work on the English Reformation, was the Rector of New Alresford. For many years the Rectory of Headbourne Worthy, near Winchester, was the home of Joseph Bingham, and there he wrote his great work on The Antiquities of the Christian Church.

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Robert Lowth, the Hebraist, still remembered as the author of the Life of William of Wykeham and of the Lectures on Hebrew Poetry, spent some years in the quiet retirement of Woodhay, a parish also associated with Thomas Ken. For thirty years William Gilpin was Vicar of Boldre, a most sequestered parish in the New Forest, and there he penned his beautiful book on Forest Scenery. The life-long connexion of Gilbert White with Selborne resulted in the production of the greatest classic on Natural History in the English language. Amid the peaceful surroundings of the Itchen Valley, in his fine old rectory of Itchen Stoke, Richard Chenevix Trench wrote several of his works, including The Miracles and The Synonyms of the New Testament

The writer of the present volume is a country parson in Hampshire, and the various chapters of his book are the outcome of quiet leisure, especially in the early morning hours before the village is awake and while "the very houses seem asleep," or the result of a few weeks' holiday by the sea. In gathering together this slender harvest of his labours he desires to express his grateful acknowledgments to the Editors of the reviews and

publications in which the articles originally appeared—The Nineteenth Century and After, The Cornhill Magazine, The Monthly Review, Chambers' Journal, The Saturday Review, The Outlook, Country Life, The Churchman, The Church Monthly, The Sunday Magazine, and The Monthly Packet—for their courteous permission to republish them. Some of the articles, like those on Linnæus, and Thompson, and John Stuart Mill, are of a more general character; others, like "George Crabbe as a Botanist," "A Botanical Legend," and "On the Common" at Walberswick, are associated with holidays on "The Suffolk Shore"; while the majority of the papers are in more or less close relationship with localities nearer home, such as, for instance, "The Rector's Glebe" and "The Pagan Burial-Ground." The research and observation necessary to the production of these articles has been to the author a source of recreation in its best and truest sense. He has found refreshment from the pressure and anxiety of parochial and diocesan duties, not with the Lotus-Eaters in "resting weary limbs on beds of asphodel," and saying "slumber is more sweet than toil," but in reaping "the harvest of a quiet eye." He can only

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express the hope, in concluding this brief introductory paper, that the perusal of these chapters may appeal to some who, like himself, are—

Lovers of the meadows and the woods And mountains, and of all that we behold From this green earth.

#### CHAPTER II

#### A BOTANICAL LEGEND

On the shore of Suffolk, between Aldeburgh and Shingle Street, there stretches for some twelve or fifteen miles one of the most remarkable ledges of shingle to be seen upon the English coast. At Slaughden Quay, sacred to the memory of the poet Crabbe, and dear to the author of Omar Khayyám, the river Alde, having approached the sea within a few hundred yards, takes a sudden turn to the south, and running parallel with the beach for over a dozen miles, finally reaches the German Ocean. During its course from Slaughden Quay the river is separated from the sea only by this wall of pebbles, in some places nearly a mile broad, in others only a few hundred yards. This vast stretch of shingle, especially the part known as Orford Beach and the North Vere, cut off from the mainland by the waters of the Alde, is as dreary and desolate a place as can well be imagined. At Orford Ness there stand a lighthouse and a coastguard station, but otherwise this long "shelf" of shingle has no sign of human habitation. During the breeding season it is the haunt of

large numbers of the ringed plover and the lesser tern, which lay their eggs upon this lonely bed of stones. Of vegetation it is almost entirely destitute. A few long spires of fescue-grass may be found; but for miles one may struggle along the pebble beach without seeing a flowering plant. In describing the salt marshes of the east coast, Swinburne speaks of "miles and miles of desolation." The phrase may be more literally applied to this desert of stones: "it is a shore that is lonelier than ruin"; "a land of utter death." And yet—

Slowly, gladly, full of peace and wonder Grows his heart, who journeys here alone,

especially if the wanderer be a botanist, searching for a certain rare plant concerning which a strange and wonderful story was current in olden times.

It is said that long years ago in the reign of Queen Mary of unhappy memory, even in the year 1555, the very year in which Dr. Rowland Taylor, the learned Rector of Hadleigh in Suffolk, suffered martrydom at the stake, at a time of grievous dearth and destitution owing to a blight which ruined the harvest, there sprang up suddenly on Orford beach, "where nether grew grasse nor any earth was

ever scene," a vast crop of peas, which miraculously preserved many hundreds of persons from starvation.

The story, perhaps the most striking and interesting associated with any British plant, abundantly corroborated from contemporary sources. That the wild sea-pea, known botanically as Lathyrus maritimus, then called Pisum marinum, or the sea-pease, did in the year of dearth, 1555, grow abundantly on the pebble beach between Aldeburgh and Orford, and was thereby the means of saving many persons from actual starvation, is clearly and beyond doubt established. The evidence carries us back to within a year of the occurrence, which excited considerable interest, not only in East Anglia, but throughout the scientific world. The Bishop of Norwich, in whose diocese, then as now, the county of Suffolk was situated, in company with the Lord Willoughby and other distinguished persons, made the difficult journey-by no means easy nowadays-to the North Vere, in order to witness for themselves the marvellous occurrence. They found, we are told, "nothing but hard rockie stone the space of three yards under the roots of these Peason: which roots were great, and long, and very sweet."

The earliest allusion to the event is contained in a letter of the eminent scholar Dr. Caius, physician successively to Edward VI, Queen Mary, and Queen Elizabeth, and cofounder of Gonville and Caius College, Cambridge, written in the year 1556, not many months after the crop of "pease" appeared. The letter is addressed to the celebrated German naturalist, Conrad Gesner, to whom Dr. Caius was in the habit of communicating particulars of rare plants; and the information is incorporated in the fourth book of Gesner's Historia Animalium, a book often alluded to by our Izaak Walton, and from which he obtained many of the illustrations which adorn The Compleat Angler. From this passage in the work of "the German Pliny," quoted by old Stow in his Chronicle, we learn that in the great dearth which happened in the year 1555 the poor people on the coast of Suffolk did maintain themselves and their children with "pease," which "to a miracle sprung up in the autumn among the bare stones, on the shore between the towns of Aldeburgh and Orford, no earth being intermixed, of their own accord, and bore fruit sufficient for thousands of persons." Our next authority is Dr. William Bullein, who

resigned his rectory of Blaxhall in Suffolk in the year 1554, when Queen Mary came to the throne, because of his staunch adherence to the principles of the Reformation. He then turned his attention to medicine, and seems to have acquired considerable reputation both as a physician and a man of learning. In 1562, he published his Bulwarke of defence against all sicknes that dooe daily afflict mankinde, in which scarce herbal we find a most quaint and interesting account of the springing up of the sea-pease at Orford. The passage, which I copied from the original edition of the work in the British Museum, was written, it will be noted, shortly after the event it relates. This is what our learned Suffolk author says—

"In the year of our salvation 1555, in a place called Orford in Suffolk, betwene the haven and the main sea, where never plowe came, nor naturall earth was, but stones only, there did Pease growe, whose rootes wer more than ii fadomes long; and the coddes did grow upon clusters, like the kaies of Ashe-trees, bigger than fitches, and lesse than the field Peason. Very sweete to eate upon, and served many poore people, dwelling there at hande, which els would have perished for hunger, the skarce of bread that yere was so great; insomuch that the plain poor people did make very much of Akornes, and a sickness of a strong fever did sore molest them that yere, as none was ever herd of there. Now, whether," adds our learned parson and physician, "the occasion of these peason, and providence of God, came through some shipwrake in mocke miserie, or els

by miracle, I am not able to determine thereof, but sowen by man's hand they were not."

Some years later Camden, in his *Britannia*, published in 1607, refers to the story, saying that "the inhabitants tell you that the *Peaes* grew miraculously," but "the more thinking people affirm that Pulse cast upon the shore by shipwreck used to grow there now and then, and so," he adds, "the miracle is lost."

We now pass over some five-and-twenty years, by which time more scientific principles had begun to prevail. The whole story is carefully related by Thomas Johnson in his edition of Gerarde's Herbal, published in 1633, and now for the first time we find the true explanation of the "wonder." After quoting Gesner and Stow he proceeds: "These Pease, which by their great increase did such good to the poore that yeare, without doubt grew there for many yeares before, but were not observed till hunger made them take notice of them, and quickened their invention, which commonly in our people is very dull, especially in finding out food of this nature." He then goes on to relate how his Worshipfull friend, Mr. John Argent, Dr. of Physicke, of the College in London, told him that "some yeares agoe he was in this place, and caused

his man to pull away the beach with his hands, and follow the roots so long, until he got some equal in length unto his height, yet could come to no ends of them: he brought them up with him to London and gave them to Dr. Lobel, who was then living, and he caused them to be drawne, purposing to set them forth in that Worke, which he intended to have published, if God had spared him longer life." In a posthumous work of Dr. Lobel's, published by Dr. How in 1655, we find, however, the story of the sea-pease, with the interesting addition that the long ridge of shingle between Orford and Aldeburgh was locally known as "the Shelf," but the illustration above referred to seems to have passed into the hands of John Parkinson, the King's herbalist, who reproduced it in his famous work Theatrum Botanicum. The plant is clearly the wild sea-pea, Pisum marinum, now called Lathyrus maritimus, which, as Parkinson observes, " is a special kinde, differing from all other of that kinde, and naturall only to those places about the seashore, for it is found also at Rie, at Pensie in Sussex, at Gilford in Kent over agt the Comber, and at Ingolne Milles in Lincholneshire."

A few years later the celebrated botanist

John Ray visited "the long baich of Stones running from Aldeburgh toward Orford in Suffolk," and found the sea-pease "on the end next Orford abundantly." He doubtless made the excursion expressly because of the famous occurrence which had happened some 120 years before, and to which he alludes in the following note: "That these Pease did then spring up miraculously for the relief of the poor, I believe not; that there might be then, Providence so ordering it, an extraordinary crop of them, I readily grant. Yet do they not grow among the bare stones; but spread their roots in the sand below the stones, wherewith there may also perhaps be some ouze mixt, and are nourished by the Sea-water penetrating the sands, as are many other maritime plants. Neither did they owe original to Shipwracks or Pease cast out of Ships, as Camden hints to be the opinion of the wiser; but without doubt sprung up at first naturally, they being to be found in several the like places about England." "We found it also," he adds, "near Hastings in Sussex."

There is one other notice of the story in the writings of the seventeenth century which may be quoted. Quaint old Thomas Fuller,

Prebendary of Sarum, in his Worthies of England, published in 1662, having expressed the pious wish that "Grain of all kinds may be plentiful," goes on to say: "But, if a Famine sd happen, let the Poor not distrust Divine Providence, whereof their Grandfathers had so admirable a testimony, when in a general dearth all over England, plenty of Pease did grow on the Seashore near Dunwich in Suffolk (never set or sown by humane industry) which, being gathered in full ripeness, much abated the high prices in the Markets, and preserved many hundreds of hungry Families from famishing."

Such is the famous story of the sea-pease in the year 1555, associated with the long ridge of pebbles which runs between Aldeburgh and Hollesley Bay. It was therefore with feelings of keen interest that I visited this lonely "shelf" of shingle last summer. The sea-pea (Lathyrus maritimus) is a rare and very local plant, having only been recorded for some five or six English counties. It is still to be found on the Chesil Beach near Portland, and in one or two places on the shores of Sussex and of Kent; but in the Isle of Wight, where it formerly existed, the plant has entirely disappeared, and in some other localities. On

the shingly seashore of Suffolk I felt certain, however, that the plant still remained; at the Crabbe celebration a few years ago a specimen from Aldeburgh gathered and preserved by the poet was exhibited; and Hind's Flora of Suffolk contains records of more recent discoveries. The plant, however, is noted as "rare," and the extent of shingle is vast, while walking is difficult and tiring. For some time I stumbled along the bare pebble waste, apparently, as the poet says, "endless and boundless and flowerless "; the grey desert of stones was unrelieved by any vegetation, except here and there a few thin spikes of grass; several sea-swallows accompanied me off the shore, descending now and again with a splash into the water; sometimes a ringed plover would rise up from the desolate beach, while away in the marshes on the other side of the river Alde could be heard the mournful wail of the plover. At length in the far distance I spied a dark patch upon the uniform level of dull grey stones. As I drew nearer it became increasingly evident that the dark patch was due to vegetation; but the appearance seemed altogether strange to me. A few steps further on, and I was certain that I had never seen the species before. I hurried

forward in my excitement, and there, to my intense delight, on the bare bed of shingle, was a large patch of what was clearly the seapease of the old botanical legend. I sat down on the pebbles beside it to examine the plant more closely. Yes, it was beyond doubt Lathyrus maritimus: the prostrate habit, the oval form, the handsome flowers passing from deep crimson into purple and variegated with touches of lighter colour, the long roots "ii fadomes and more in length, and yet no coming to the end thereof," above all, the great clusters of seed-vessels, "like the kaies of ashetrees," "in large bunches like unto grapes," as another old writer has it—as many as nine pods in a cluster, each containing six or more peas—all proclaimed it to be the "Peason" of Dr. Caius and Dr. Bullein, of Johnson and Lobel. My long journey and "painful" trudge for miles over the shingle had been abundantly rewarded: I had found a British plant I had never seen before, a plant of historical interest, and in an historical situation. There it grew on the long shelf of shingle, "with no earth intermixed," as in the far-off days of Queen Mary when famine ruled the land.

The discovery added fresh zest to my

investigation. I must discover, if possible, if the plant still flourished in any such abundance as in the year 1555. So for some days I continued my wanderings along the Suffolk shore: from Landguard Fort at the mouth of the river Orwell to the ruined church of Dunwich, I searched in likely places for the sea-pease. Nor were my efforts unrewarded. In four distinct localities I came across the species, in some places in large patches of goodly size. The plant never seemed to grow singly, but always in colonies, forming dark-green oases on the bare desert of stones. One circular patch on the shore over against the North Vere proved to be eight yards in diameter; the plants of which, heavily leaden with dark brown pods, also bore a few clusters of beautifully variegated crimson flowers. The North Vere itself, as the extreme end of Orford beach is locally called, I was unfortunately unable to visit; but an intelligent officer of the coastguard, whose duties frequently took him to that desolate spot, and to whom I showed a specimen of the plant, which he at once recognized as what he called the "seatare," told me that it grew there so abundantly as completely to cover the shingle in places, and that in the autumn, when the peas

were ripe, large flocks of pigeons assembled to feed upon them. The North Vere, he added, was the scene of the celebrated capture of John Luff the smuggler, as related by Cobbold in his history of *Margaret Catchpole*; if I could come with him (but it would take some hours to get there) he would show me the exact spot where the famous fight took place, and also the Red Cottage on Havergate Island in which the old shepherd lived.

It was therefore clearly established that the sea-pea continues to flourish in its ancient haunts, if not in such remarkable abundance as to suggest Providential interference, at any rate in large and luxuriant quantities. If the peas be no longer gathered for food, as in the days when "the plain, poor people did make very much of Akornes," yet vast numbers of wood-pigeons continue to flock to the autumnal banquet. Unnoticed before the year 1555, when "hunger quickened the people's invention," they have remained for the most part unnoticed since, except now and again when some "wandering herbalist" like Dr. Argent or the illustrious John Ray visited the lonely shore, or when the distinguished author of Tales of the Hall, gathered a few choice specimens to add to his Suffolk herbarium.

#### CHAPTER III

#### IN THE FOOTSTEPS OF JOHN RAY

In the early summer of 1662 John Ray, accompanied by Francis Willughby, made an expedition into Wales to collect rare plants, and to note facts in natural history. An account of this "itinerary" or "simpling journey" has been preserved in the form of a diary. It is a pleasant task to follow in the footsteps of these two early naturalists, and to note the changes which have passed over the Fauna and Flora in two hundred and fifty years. The comparison is the more interesting because, in many instances, the plants found by Ray were now recorded for the first time as belonging to the Flora of Great Britain. Moreover, the observations on birds, especially on those which bred and still breed in countless numbers on some of the islands lying off the coast of Wales, make part of the original material of the famous work on ornithology, which, after the untimely death of Francis Willughby, was published by his companion and fellow-naturalist. So with the History of Fishes, also arranged by Ray

after his friend's death, much information was obtained on this expedition, especially at Tenby "near which town great variety of fish is taken."

On the journey down the Welsh coast many rare and interesting plants were collected. In several places the sea-cudweed or cottonweed was met with, an "elegant plant," as Ray rightly says, thickly clothed with felted grey wool, and carrying dense corymbs of yellow flowers, now nearly extinct in Great Britain, but in the seventeenth century to be found in many spots. The sea-stock, which Ray calls the "great sea-stock gillyflower with a sinuated leaf," was also found, and the beautiful Welsh poppy "near the upper end of Llanberis pool"; while in several places he notes the lovely vernal squill, one of the choicest of our native plants, as "growing in great plenty." On Prestholm Island and on the Isle of Bardsey, "a pretty little spot rented for £50 per annum," many wild-fowl were breeding, including puffins, razorbills, cormorants, two kinds of seagulls, and sea-pies or oyster-catchers. Still moving southwards "a poor village called Fishgard" is reached, where our travellers are "put to it for a lodging." Thence they

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proceeded to St. David's, viewing with much interest "the old Cathedral, with its divers ancient monuments, and the handsome chapel of Bishop Vaughan's"; while at St. David's Head, near the "stone called the shaking stone," the vernal squill is again met with, and on many rocks the rare sea-spleenwort fern is found. Leaving St. David's, the two naturalists rode to Haverford West, where they lay on Sunday, passing by Ramsey Island, so called, says Ray, from ramsons plentifully growing there. Thence to Pembroke, and the same day to "St. Gobin's Well, by the seaside, where, under the cliff, stands a little chapel sacred to that saint, and a little below it a well famous for the cure of all diseases. There is," says Ray, "from the top of the cliff to the chapel a descent of fifty-two steps." Leaving the magnificent coast scenery in the neighbourhood of St. Gavan's Head, our travellers proceeded to Tenby, "a place strongly situate, and wellwalled, and having a very pretty safe harbour made by an artificial pier of stone."

At Tenby Willughby was able to examine a large "variety of fish," of which Ray gives a list of some fifty species as taken near the town. During their sojourn the two passed

over to Caldy Island, which lies about two miles distant from Tenby harbour, and were civilly received by Mr. Williams, the owner. This visit to Caldy is of interest, not only for the early monastic traditions associated with this island of the saints, but also for the entries which Ray made in his journal. Besides several items on the archæology of the place, and the number of birds breeding on the magnificent cliffs, he gives a list of the rarer plants he noticed growing there. Among the species specially mentioned in this botanical entry of the year 1662 are the tree-mallow, which Ray saw "in great plenty on the rocks, the golden samphire, the vernal squill, the sea-spleenwort, and a kind of Tithymalus." The tree-mallow is a rare and noble plant, often attaining a height of six feet and more, with a woody stem, and soft downy leaves, and abundance of purple flowers. It is a seaside plant, found only on rocky coasts in a few localities, and was far commoner in former days than now; indeed, in many of its old haunts it has become entirely extinct. But there, on "the rocks of Caldy Island," I saw it growing as luxuriantly in 1905 as when Ray saw it in the first week of June two hundred and forty-three seasons

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ago. Great shrubs of it were perched in inaccessible positions on the face of the almost perpendicular cliffs in defiance of wind and storm. In company with it, also growing on the rocks, might be seen in abundance the golden samphire. Owing, no doubt, to the exposed situation, it was more stunted than it is in the salt marshes of Essex and elsewhere. The "kind of Tithymalus" which Ray noticed on the island was almost certainly the Portland spurge, a small and uncommon species, found only near the sea, and at once distinguished by its bushy habit, and by the red hue of its stem and lower leaves. This conspicuous little plant is now abundant in Priory Bay; it is scattered, in company with the Burnet-rose, the blue fleabane, and the dwarf centaury, all over the sandy turf which stretches on each side of the ancient track which leads up to the old Benedictine monastery. Ray mentions this "abbey or priory," the buildings of which have been recently restored and which present features of unusual interest. There is the little cloistergarth, only twenty-seven feet square, and around it, in the usual order, the chapel, the gatehouse, the refectory, and the kitchen; while overhead runs the dormitory with the Prior's

chamber opening out of it. In the little chapel, restored to its ancient use by the owner of the island, an almost unique example of a fifteenthcentury reliquary is preserved. The story of its recovery is romantic. In the early part of the last century the "King of Caldy" was engaged one morning in hunting a wild cat on the broken ground above the cliff where the wild mallow grows. The creature took refuge in a fissure of the rock, and in digging it out the little alabaster reliquary was unearthed, having doubtless been hidden in the crevice by the monks when the monastery was dissolved in the days of Henry VIII. It is in the form of a tomb, with a recumbent effigy on the top, and at the time of discovery had much colour remaining on its surface. Little thought Ray and Willughby, as they stood upon the cliff and admired the golden samphire, of the priceless relic which lay within a few feet of where they were standing.

At low water the two naturalists made their way over the jagged reef to the sister islet of St. Margaret's, on which stand the ruins of a small chapel. The island is uninhabited, except by sea-fowl—"puits and gulls and sea-swallows"—whose nests, says Ray—and his description still holds good—"lie so thick

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that a man can scarce walk but he must needs set his foot upon them." This lonely rock is pierced by caverns of great beauty, and in these caverns may still be seen, as in the seventeenth century, the rare and beautiful fern, Asplenium marinum, the sea-spleenwort. The turf above is studded in early summer with the sky-blue flowers of the vernal squill. No British plant, it has been said, confers a greater grace on its haunts than this. Its only fault is that it remains in blossom so short a time. But it was in all its glory when Ray and Willughby stood beside the ruins of the ancient chapel, and listened to the weird cries of the sea-fowl breeding on the rocks below.

The neighbourhood of Tenby is indeed a rich hunting-ground to the botanist. Ray only notes a few of the rarer species: many uncommon plants, characteristic of the neighbourhood, are passed over in silence. It is strange, for instance, that he does not mention the dwarf Burnet-rose, or pimpernel-rose as he calls it elsewhere, which covers the sandy burrows of the South Pembrokeshire coast. At the time when Ray visited Caldy it was in full flower, and its beautiful pink and white blossoms lay scattered in profusion over the

springy turf. On the lofty headland of Giltar, opposite St. Margaret's Isle, it is abundant, together with other choice species. The Caldy rarities are all there, and in addition the lesser-meadow-rue, with its delicately cut leaves and conspicuously yellow stamens, may be found, and on one spot the wild asparagus. Ray found this rare plant a few years later at the Lizard, where it still grows in abundance on a small island known as Asparagus Island. On the rocks of Tenby, in company with the tree-mallow, and a rare form of sea-lavender, will be seen large and luxuriant bushes of the wild sea-cabbage, the origin of our garden varieties. This plant, which makes a fine show with its conspicuous yellow flowers in early summer, may be regarded as a native of South Wales. It was in bloom when Ray visited "the well-walled town," but he does not mention it among his notable discoveries.

One most interesting and characteristic plant which Ray met with in several places on the shores of Wales I sought for in vain. Until recent times the great sea-stock with a sinuated leaf and deep purple flowers might be found on the sandy coast between Tenby and Giltar Head, and there is a specimen from that part in the British Museum, gathered

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forty years ago. Since then the plant has not been seen. It is one of the most interesting in Wales; and, although unrecorded of late years, is still doubtless flourishing in some secluded nook or sandy bay along the magnificent coast of South Pembrokeshire.

### CHAPTER IV

#### LINNÆUS

THE celebration of the two hundredth anniversary of the birth of Linnæus, held at Upsala in June, 1907, when representatives from Oxford and Cambridge, and indeed from all the Universities of Europe, were present, was in many ways a memorable one, and while doing honour to the memory of a great man, at the same time recalled to mind his immense services to science. A short account therefore of his career should not be inappropriate or uninteresting. Fortunately, there is no lack of material dealing with his life and labours. A considerable literature has gathered around his writings; while, in addition to several more or less authentic biographies, he left behind him a diary, or autobiography, full of interesting details, and not destitute of touches here and there which reveal the unquestioned fact that the great naturalist was not unconscious of the eminence to which he had attained.

Carl Linnæus—the family name is said to have been taken from a large linden-tree

which stood near the ancestral home—was the eldest son of the pastor of Stenbrohult in Sweden, and was born on May 24, 1707, "a delightful season of the year in the calendar of Flora," as he afterwards notes in his autobiography, "being between the months of frondescence and florescence." Almost from infancy, "before he was well out of his mother's arms," he evinced, we learn, a strong partiality for flowers. When hardly four years old he chanced one day to accompany his father, who "was an uncommon lover of rare plants," to a rural festival, where in the evening the pastor discoursed to some of the company on the properties of orchids. Young Carl listened attentively, and "from that time never ceased harassing his father with questions about the name and nature of every plant he met with." At the age of eight he was allotted a little garden of his own, which he quickly stored with weeds and wild-flowers from the neighbourhood around.

In due time the boy was sent to a "Latin school" with a view to his eventually becoming a minister. His love of botany, however, stood seriously in the way of his theological studies. His time was chiefly occupied in

collecting and examining plants, and in reading books on botanical subjects. It became at length abundantly clear, to the great disappointment of his parents, that young Linnæus was unfitted for the pastoral office, and, on the advice of his tutor, the good pastor of Stenbrohult actually entertained the idea of apprenticing his son to a tailor or sheemaker. This design was happily frustrated by one Dr. Rothmann—the first of many patrons who befriended our naturalist—who, perceiving the lad's aptitude for science, offered to take him into his own house, and to prepare him for the medical profession. From the home of this generous patron, who instructed him in physiology and introduced him to the works of Tournefort, Linnæus at the age of twenty went up to the University of Lund to continue his medical education. There he lodged at the house of the distinguished physician, Stobæus, to' whom he quickly endeared himself by his assiduous attention to study. After a year's residence at Lund, Linnæus determined, on the advice of Dr. Rothmann, to remove to Upsala, where greater facilities were afforded for medical studies. Before long, however, Linnæus found himself in dire poverty. His parents were

unable to help him, and pupils he could not obtain. He was obliged, he tells us, to trust to chance for a meal; and, with regard to dress, was driven to such straits that he was glad to wear the cast-off clothing of his fellowstudents, and when his boots needed repair to patch them himself with brown paper or the bark of trees. It happened, however, one day in the autumn of 1729, whilst he was intently examining some plants in the academical garden, "there entered a venerable old clergyman who asked him what he was about, whether he was well acquainted with plants, whence he came, and how long he had been prosecuting his studies." The answers of Linnæus to these inquiries made so favourable an impression on the mind of his aged interrogator, who proved to be the learned Dr. Celsius, Professor of Divinity in the University, that he asked the poorly-clad student to accompany him to his home. Happy results followed. The Professor, who was engaged upon his famous treatise on the plants of the Bible, and who needed some literary assistance, invited the co-operation of Linnæus, and offered him board and lodging in his own house, and the full use of his library, which was especially rich in

botanical works. Not long afterwards, falling in with a review of Vaillant's Discours sur la structure des fleurs, the thoughts of Linnæus were directed to the essential importance of the stamens and pistils, the outcome of which was a little treatise on what afterwards came to be known as the sexual system of plants. He presented the manuscript to Dr. Celsius, who at once put it into the hands of Dr. Rudbeck, Professor of Botany. The latter was so struck with the originality of the composition that he expressed a desire to be introduced to the author, with the gratifying result that a few months later, Linnæus, though only a student, was appointed deputy to the aged Professor. He began his lectures without delay, set about rearranging the academical garden, and also instituted regular botanical excursions, which before long were attended by a large number of private pupils. At this period, he tells us, not a moment of his time was unoccupied: his mornings were devoted to lecturing and private teaching, and his evenings to working at the new botanical system he had conceived; while he also began several of those works which afterwards rendered his name famous

The great success which attended his lectures at Upsala unfortunately excited the jealousy of certain members of the University, which at length rendered his position so intolerable that in 1732 he accepted the invitation of the Academy of Sciences to visit Lapland for the purpose of examining the natural productions of that country. The journey occupied some five or six months, during which he travelled, mostly on foot, over 4,000 English miles, and endured, he tells us, "more hardships and dangers than in all the travels he afterwards undertook." On several occasions he nearly lost his life in crossing swollen rivers or mountain torrents, and once, when searching for plants on a hillside, "one of the Finmarkers inhabiting the coast shot at him, but missed his aim." The story of this expedition, which he afterwards published in Swedish, contains many details of striking interest with regard to the condition and customs of the people, and to the natural history of the region; while it is worthy of remark that, at this early period of his career, the list of plants, of which he found a large number never before described, is arranged according to the sexual system, which he afterwards brought to such perfection. On

his return to Upsala, finding that the opposition to his teaching had rather increased than otherwise, Linnæus retired to Fahlun, where he endeavoured to obtain a livelihood by medical practice, and where he became on terms of close intimacy with Dr. Browallius, Chaplain to the Governor. It soon became clear, however, that if he was to succeed in his profession it was necessary for him to take a doctor's degree, which at that time was usually obtained by Swedish students at the University of Harderwyk in Holland

Acting therefore on the advice of his friend, Linnæus, who was now twenty-eight years of age, proceeded to Harderwyk, where shortly afterwards he was admitted to his degree. In Holland, however, owing in a great measure to the patronage and interest of the celebrated physician Boerhaave, he was destined to remain three years—a period of much importance in the life of our naturalist. Through the munificence of successive patrons he was enabled to devote his whole time to botanical investigation and literary work. His Systema Naturae was published at the expense of one Dr. Gronovius. For nearly a year he resided with Dr. Burmann, the Professor

of Botany at Amsterdam. On the recommendation of Boerhaave, he was engaged by a wealthy banker named Clifford to rearrange his magnificent garden at Hartecamp, where, we learn from the Diary,

Linnaeus lived like a prince, had one of the finest gardens in the world under his inspection, obtained permission to procure all the plants that were wanted in the garden, and such books as were not to be found in the library; and, of course, enjoyed all the advantages he could wish for in his botanical labours, to which he devoted himself day and night.

In the summer of 1736, at the expense of his patron, Linnæus visited England, for the purpose of communicating with our botanists, and of viewing the gardens of Chelsea and Oxford. He carried with him a letter of introduction, quaintly expressed in Latin (now preserved in the British Museum), from the venerable Boerhaave to our great collector and naturalist, Sir Hans Sloane, which may be translated as follows: "Linnæus, who bears this letter, is alone worthy of seeing you, alone worthy of being seen by you. He who shall see you both together, shall see two men whose like will scarcely ever be found in the world." In spite, however, of this warm encomium. Linnæus did not receive the welcome he naturally expected; the aged baronet being evidently displeased at

the innovations in system and nomenclature introduced by the younger botanist. Oxford, too, he at first met with little encouragement. The learned Dillenius, editor of the enlarged edition of Ray's Synopsis, and Professor of Botany at the University, received him with much haughtiness and suspicion, as "the young man who confounds all botany." On further acquaintance, however, Dillenius was so impressed with his knowledge and ability that "he detained him at Oxford a month, without leaving Linnæus an hour to himself the whole day long, and at last took leave of him with tears in his eyes, after having given him the choice of living with him till his death, as the salary of the professorship was sufficient for them both." On the whole, Linnæus seems to have been much gratified by his brief visit to England. The wealth of wild flowers pleased him greatly, especially the vast expanse of golden gorse on Putney Heath. He was much impressed, too, with the splendid collections of Sir Hans Sloane and of Sherrard, while he received a large number of rare specimens from the botanic gardens of Oxford and Chelsea with which to enrich his patron's garden at Hartecamp.

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At length it became necessary that Linnæus should find some settled means of obtaining a livelihood. He determined, therefore, to leave Holland, and to establish himself as a physician at Stockholm. At first he met with much disappointment. He who was regarded as Princeps Botanicorum abroad found no honour among his own countrymen. Linnæus had not been in love," we read, "he would certainly have left Sweden." But before long "adversity ceased to persecute, and after many clouded days the sun broke through his obscurity." He obtained a large medical practice, "as much as all the other physicians in Stockholm collectively." His marriage with the daughter of Dr. Moræus followed in the summer of 1739, and several public appointments were conferred upon him. Still Linnæus was not satisfied. "Once," he said, "I had plants and no money; now I have money and no plants."

The goal of his ambition was not, however, far distant. In 1740 the chair of botany at Upsala fell vacant owing to the death of the aged Professor Rudbeck. Linnæus at once became a candidate for the post, which nevertheless was given to his old rival Rosen, whose claims by reason of long residence it was

difficult for the University to pass over. But in the following year Linnæus was appointed to the chair of medicine, which, by an arrangement confirmed by the king, he was allowed to exchange with Professor Rosen for that of botany. Thus, at the early age of thirtyfour, Linnæus obtained "the very post he desired of all others in the word"; his merits were now recognized in every European country; and henceforth his life could be dedicated to the science that he loved. In the autumn of 1741 he removed with his wife and infant son to Upsala, which was to be his constant residence till his death, thirty-seven years later. He inaugurated the duties of his professorship by delivering before the University a Latin oration on "The benefits of travelling in one's own country "---one of the most animated of his many utterances. He immediately set to work to carry out many needful reforms. The botanic garden was rearranged on a magnificent scale; new greenhouses were erected; while his own residence was "converted from a veritable owls' nest into a lodging fit for a professor." The new garden was quickly stocked with rare and choice specimens, collected by friends and disciples in various parts of the world.

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Dillenius sent plants from Oxford, and Jussieu from Paris; while consignments arrived from Siberia, India, and America. Six years after his appointment we find from the published catalogue that the garden contained 1,100 species of plants in addition to those indigenous to Sweden. As a teacher Linnæus attracted large numbers of students to the University; and he possessed in a remarkable degree the rare faculty of inspiring others with the same enthusiasm which he himself possessed. Indeed, there is nothing more striking in the career of our great naturalist than the way in which he gained the affection of his pupils. In the course of time he had, as he tells us, "pupils in every part of the world in constant communication with him." His botanical excursions became a recognized part of the duties of his office.

During the summer term he took out with him about 200 pupils, who collected plants and insects, made observations, shot birds, kept minutes, and after having botanized from seven o'clock in the morning until nine in the evening, every Wednesday and Saturday, returned with flowers in their hats, and accompanied their leader, with drums and trumpets, through the city to the garden.

But the labours of Linnæus were not confined to the lecture-room, the botanic garden, and the natural history excursions: his literary productions were immense. During

his three years' residence in Holland he had published a number of works in which his new system of botany was clearly exhibited. Among these may be mentioned his Classes Plantarum, including the famous "fragment" which foreshadowed the natural arrangements of plants; his Bibliotheca Botanica; his Genera Plantarum, in which the sexual system is completely unfolded, and which was quickly followed by the Flora Lapponica, and the Hortus Cliffortianus, the "most splendid" of his works. After his settlement as Professor of Botany at Upsala, Linnæus issued revised editions of some of these earlier writings, while other and even more important works came from his pen. In 1751 appeared his Philosophia Botanica, which may be regarded as the text-book of Linnæan botany. In this work, composed to a great extent for the use of his pupils, in order that the terms and principles of his system might be explained in one volume, Linnæus in a masterly manner surveys the whole field of botany. In those chapters especially which treat of the principles of systematic botany, "the strong side of his intellect appears with splendid effect"; but it is difficult to know, as Pulteney says, whether we ought to

admire most his inventive power, or that exquisite scientific arrangement which he has given to the whole. At the end of the volume we meet with several curious chapters of a practical nature, on such subjects as forming an herbarium, as conducting botanical excursions, as laying out a botanic garden, as the idea of a complete botanist. It is of this work that Rousseau said, "It is the most philosophical book I ever saw in my life." Two years later Linnæus published his Species Plantarum, in which volume he first employed what he calls trivial names, that is, single Latin words to express the species as distinguished from the genus of a plant. He thus became the real founder of the binary method of nomenclature, and in this respect his services to science cannot be over-estimated. Among his other numerous writings one at least cannot be passed over in silence. For many years he had spent his spare moments on a work which was to embrace the whole realm of Nature. His plan as regards the vegetable kingdom had already been exhibited in various publications, such as the Genera Plantarum, and the earlier editions of the Systema Naturae. At length, in 1766, appeared the first volume,

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which was followed by two volumes more, of the twelfth and final edition of this work—the *Systema Naturae*, perhaps the grandest and most important of his writings—what he himself speaks of as "an excellent performance." Nature is divided into three kingdoms—mineral, vegetable, and animal; and the whole work displays an extent of knowledge, together with a genius for classification, and a brilliancy of description, such as are difficult to exaggerate.

From the time of his appointment to the Chair of Botany at Upsala, honours fell thickly upon Linnæus. He had already been received into the Imperial Academy, under the classic name of Dioscorides secundus. Medals were struck in his honour. Most of the learned societies of Europe gave him academic distinctions. In 1753, the King of Sweden created him a Knight of the Polar Star, and a few years later granted him letters of nobility, when he changed his name, in accordance with the Swedish custom, to Von Linné. The coat-of-arms which then assumed was appropriate and suggestive The shield was divided into three fields, denoting the three kingdoms of Nature; in the middle was an egg, in allusion to his

fundamental position "omne vivum ex ovo," while the crest was the humble plant (Linnaa borealis) inseparably associated with his name, and the motto, Famam extender efactis. After more than thirty years' uninterrupted success as Professor of Botany at Upsala, Linnæus' health broke down. He was seized morning with a fit of apoplexy as he was lecturing in the botanic garden. This stroke marked the beginning of the end. We read in the Diary, "Linnæus limps, can hardly walk, speaks unintelligibly, and is scarcely able to write." A second seizure followed, and the last year of his life was passed in a painful condition of mental and physical decay. His death at length occurred on January 10, 1778, a few weeks after that of the celebrated Haller, and he was buried with much state and solemnity in the cathedral church of Upsala.

In attempting to estimate the services of Linnæus to science, the chief stress must undoubtedly be laid on his marvellous powers of classification and of description. "He might," says Professor Sachs in his masterly sketch of the writings of Linnæus, "almost be said to have been a classifying, co-ordinating, and subordinating machine." His great

merit consisted, not so much, as in the case of Darwin, in the importance of his discoveries, as in the wonderful skill with which he gathers up and fuses together all that was serviceable in the labours of his predecessors. ideas on which his theories are based may be found scattered up and down the works of Cesalpino, Jung, Ray, Bachmann, and Tournefort, but it was Linnæus who recognized their importance, and developed them with the skill of a master. "We are often astonished to see the thoughts of those writers, which in their own place look unimportant and incomplete, fashioned by Linnæus into a living whole." Even the theory of sexuality in plants had already been suggested by Millington, Grew, and other botanists, and indeed clearly demonstrated by Camerarius, but the importance of the fact remained unrealized until Linnæus founded upon it his famous artificial system. And with this genius for classification there was combined a power of terse and accurate description such as has rarely been equalled in any writer. With him descriptive botany assumed an entirely new form. He possessed the faculty of

framing precise and striking descriptions of species and genera in the animal and vegetable kingdoms by means

of a few marks contained in the smallest possible number of words. Indeed (says Professor Sachs), the greatest and most lasting service which he rendered both to botany and to zoology lies in the certainty and precision which he introduced into the art of describing.

We have already noticed that he was the founder of what is known as the binomial nomenclature, a method of naming organisms still in universal use, and one which has changed the whole "realm of natural history" from chaos to order. "What was done for geography by line of latitude and longitude," says the late Professor Earle, "was done for botany by the Linnæan system, for in the one case as in the other, it was rendered possible to speak of the objectmatter of the science in unmistakable terms." That the sexual system associated with his name was artificial, Linnæus openly admitted. "I have never pretended," he writes to Haller, "that the method was natural." Moreover, he repeatedly declares that to discover the natural system should be the aim chief of botanists. "A natural system," he says in his Philosophia Botanica, "is the first and last object to be aimed at by botanists. A perfect system of this kind should group plants allied in habit, mode of growth, properties, and uses." And it is worthy of

notice, as has already been pointed out, that of such a system Linnæus left a sketch, in which he first clearly established no less than sixty-five truly natural groups or families of plants. And it was by adopting the principle indicated in this sketch or "fragment" that Bernard de Jussieu, and succeeding botanists, were enabled to further develop that system which is now recognized as the natural one in the vegetable world.

In glancing at the more personal aspects of the life and services of Linnæus, it is impossible entirely to pass over his vanity and love of fame. This weakness, or "infirmity of noble minds," finds frequent illustration in the pages of his autobiography. We are there told, for instance, that the Almighty permitted him to visit His secret councilchambers, to see more of the creation than any mortal before him, and gave him greater knowledge of natural history than any one had hitherto acquired. No person, we learn, had ever proved himself a greater botanist or zoologist, had ever written more works in a more precise and methodical manner, had ever become so celebrated all over the world, or was ever chosen into a greater number of scientific societies. "The

Lord hath been with him," he tells us, "whithersoever he hath walked, and hath cut off his enemies from before him, and hath made him a name like the name of the great men that are on the earth." Much more to a like effect might be quoted from the pages of the Diary, but as a further illustration to the same tendency the following legend, inscribed beneath one of his portraits, may be quoted: "Deus creavit: Linnæus disposuit." It must, however, be remembered that conscious as Linnæus undoubtedly was of his unique position in the scientific world, no man ever showed a stricter regard for truth or a more generous appreciation of the labours of other men. In his Classes Plantarum, where he sums up the achievements of his predecessors in the realm of botany, he never, as Professor Sachs has pointed out, betrays a trace of jealousy, but often indeed speaks of their work in terms of the warmest respect and admiration. Again, with regard to his opponents—and that Linnæus suffered much from the envy and jealousy of the scientific world will not be denied - his attitude was marked by much wisdom and dignity. Bearing in mind the advice of his venerable friend Boerhaave, he wisely

determined to abstain from controversy, and he never answered his detractors, no matter how virulent their invective. Time, as he said to Haller, is too valuable to be spent in disputes.

And that the mind of Linnæus was animated by a truly religious instinct will not be questioned. Over the door of his lectureroom he caused the motto to be inscribed-"Innocue vivito: Numen adest"; and he always endeavoured, he tells us, to trace his "science to its Author." This feeling is displayed in many passages of his writings, and more than once we meet with glowing expressions of gratitude to Providence for that taste for science and natural history with which he had been gifted, and which had added so much to the delight and interest of his existence. A strange and striking illustration of the religious aspect of his character is to be found in his treatise on the "Nemesis Divina," which he bequeathed in manuscript to his son, with the request that it should never be published.

Among other characteristics of the great naturalist may be mentioned his keen recognition of the value of time. During the summer months he was accustomed to rise

at three o'clock in the morning, and even in the winter to begin his day's work at six. Not an hour, as we have seen, would he spend in controversy. Every available moment must be devoted to his beloved science. Strange as it may appear, he even considered it waste of time to learn foreign languages. "Time," he said, "is never bought so dear as when people go abroad for the sake of languages." He made, it appears, no attempt himself to learn English or French, or even Dutch, although he "staid in Holland three whole years." "Linnæus' time," we read, "did not allow him to study languages." We further learn that he never ventured to procrastinate, for he considered "time as the most uncertain thing in the world." For the fine arts he cared but little, and his ear was insensible to the charms of music. The one interest of his life was the investigation of Nature, and to this object his whole time was dedicated.

It is interesting to notice, in conclusion, that in several of the numerous portraits of Linnæus a sprig of the lowly Lapland flower Linnæa borealis, is, in some way or other, appropriately introduced into the picture. In the famous portrait once in the possession

of Sir Joseph Banks, the great naturalist is represented as holding a specimen in his hand; and this, too, is his attitude in the picture prefixed to the *Philosophia Botanica*, which Linnæus considered his best likeness. In another well-known portrait he wears the flower in the button-hole of his coat. Of peculiar interest to all botanists is this little northern plant, "long overlooked, depressed, lowly, flowering early," which Linnæus first found at Lycksele, on May 29, 1732, and afterwards selected as the most appropriate species whereby to transmit his name to future ages.

#### CHAPTER V

#### A MODERN DRUID

In his exquisite Ode on the Death of Mr. Thomson, an ode not unworthy of comparison with Milton's Lycidas or Shelley's Elegy on Keats, William Collins employs the term "Druid" with reference to his friend. The designation is a singularly happy one. In Thomson's deep veneration for Nature, in his love of woodland scenery, in the strong religious sentiment which in certain passages of The Seasons almost borders on Pantheism, Collins recognized a likeness to the ancient priesthood—

In yonder grave a Druid lies.

To James Thomson belongs the honour of inaugurating a new era in poetry. Wordsworth's criticism is well known that "excepting the Nocturnal Reverie of Lady Winchilsea, and a passage or two in the Windsor Forest of Pope, the poetry of the period intervening between the publication of the Paradise Lost and The Seasons does not contain a single new image of external nature." In the year 1726 the short poem Winter appeared—a thin folio

of sixteen pages, sold at the price of a shilling —and within three months the first edition had disappeared. The poetry of Nature found a ready response in the hearts of the English people, who wondered, as Dr. Johnson remarked, that they had never seen before what Thomson showed them, and that they had never felt what Thomson impressed upon them. Riccaltoun is said to have dropped the little volume from his hand in "an ecstasy of admiration." Winter was quickly followed by its companion pieces, and the complete edition of The Seasons bound up with the famous Hymn became for a long period the most popular poem in the English language. "This is fame," exclaimed Coleridge, when he once found a dog's-eared copy of The Seasons in an inn parlour. And not only did Thomson's poetry appeal to ordinary readers, its influence on succeeding poets was immense. The school of Nature-poetry, which he may be said to have founded, suffered from no lack of brilliant scholars. There is hardly a poet of the eighteenth century who was not influenced by his writings. The sentiment of The Seasons was transmitted not only to Gray and Cowper, but also to Wordsworth. The influence of Thomson on Cowper was,

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perhaps, most marked, and it will be remembered how, in "the last glimmerings of cheerfulness," shortly before his final collapse, the poor author of the Olney Hymns walked in the moonlight in St. Neots churchyard, and spoke earnestly of The Seasons and of the circumstances under which they were probably composed. Thomson, it may be, is now mostly forgotten; his fame, not unnaturally, has been eclipsed by Burns and Tennyson; yet The Seasons and The Castle of Indolence remain among the English classics, and it is not without interest to recall the original poems in which the description of natural objects first conspicuously showed itself

Thomson's biography is an uneventful one. His fame as a poet owes little or nothing to a striking personality. He was indeed "very tenderly and warmly" beloved by his friends, among the chief of whom must be reckoned Pope and Lord Lyttelton, and he was the happy possessor of "a temper never to be agitated," but no details of biography add interest to *The Seasons*. Born in a Scotch manse in the year 1700, he was brought up among the wooded valleys of the Cheviots, the scenery of which made a lasting

impression on the boy's mind. Thomson is not much given to the description of particular localities; but the opening passage of his poem on Winter contains reminiscences of his early life amid the beautiful surroundings of Southdean. It was his parents' intention "to breed him a minister," and with this object in view he was sent to school at Jedburgh, where he was considered "really without a common share of parts." At the age of fifteen he passed to the University of Edinburgh, where he remained for some years, but making apparently little progress in theology. His bent was clearly towards literature, and he contributed several poems, including one entitled "Of a Country Life," to the Edin-burgh Miscellany. At length, in 1725, on the advice of his friends, he came up to London "to seek patronage and fame." His first want, Dr. Johnson tells us, was a pair of shoes, which forced him to work hard at his poem on Winter, the nucleus of which he had brought with him in his pocket from Scotland. After several refusals, he found in his fellow-countryman, John Millan, a publisher willing to accept the venture, and in March, 1726, just a year after his arrival in London, when Thomson was in his twenty-seventh year,

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the poem, dedicated to Sir Spencer Compton, Speaker of the House of Commons, appeared. Its success was almost immediately assured. The first edition was quickly sold out, and before the end of the year three more editions were called for. Summer followed in the course of the next year; and in 1730 a collected edition of The Seasons in which Autumn and the Hymn appeared for the first time, was published in a handsome quarto, with four engravings by Kent. At the same time a popular edition in octavo, with different engravings, was issued.

From this time Thomson's success was established. He made many friends, and obtained Government appointments. In the year 1736 he took up his abode in Kew Lane, Richmond, about a mile from Pope's villa at Twickenham, where he lived until his death, twelve years later. Here he wrote several plays, which were acted with considerable success, one of which contains the famous song "Rule Britannia"; and moreover he busied himself with a new edition of *The Seasons*, which appeared, much altered and enlarged, in 1744. At Richmond, too, he finished *The Castle of Indolence*, a poem specially admired by Wordsworth, which

was published in May,1748, just three months before his untimely death, at the early age of forty-eight, caused by a chill contracted on one of his customary walks home from London. He lies buried in the parish church of Richmond, and above his resting-place, at the west end of the north aisle, the following lines from his own *Winter* are inscribed—

Father of Light and Life! Thou Good Supreme! O teach me what is good! teach me Thyself! Save me from folly, vanity and vice, From every low pursuit, and feed my soul With knowledge, conscious peace, and virtue pure, Sacred, substantial, never-fading bliss!

It is an easy task to criticize *The Seasons*, to find fault with the florid and luxuriant diction, the verbal extravagances, the want of method which characterize the poem, and yet Thomson's great merits as a descriptive poet must be unhesitatingly admitted. In his famous work the whole magnificence of Nature, whether pleasing or dreadful, is brought before us. "The gaiety of Spring, the splendour of Summer, the tranquillity of Autumn, and the horror of Winter take in their turn possession of the mind." This is Dr. Johnson's verdict, and though it may be said that *Winter* is the most successful in producing a single harmonious impression, yet in each

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of the poems we find the same keen-sighted observation and the same masterly power of description. We might select, as examples, the graphic pictures of the robin-redbreast, "the monarch of the brook," the royal eagle, and the snow-storm. Or we listen to "the blackbird whistling from the thorny brake," while "the mellow bullfinch answers from the grove." Or, once again, "the yellow wall-flower stained with iron-brown," is seen upon the ruins, or we listen to the howling of the storm round human dwellings which, as Gray said, Thomson has described so gloriously.

We have already alluded to the deep religious sentiment which runs throughout the poems. In the magnificent Hymn, so appropriately bound up with *The Seasons*, the opening lines give the key-note of the whole work—

These, as they change, Almighty Father, these Are but the varied God. The rolling year Is full of Thee.

However much some passages in his writings may seem to suggest Pantheism, there can be little doubt that Thomson believed in a personal Creator. "The philosophy and religion of Thomson," says Mr. Macaulay, in his excellent biography of the poet published

in the English Men of Letters series, "was an optimistic Deism—the result of a deep feeling of the perfection and beauty of the created world. An essentially healthy and cheerful temperament produced in him a happy and hopeful view both of this life and of the next. Upon the evidences of love and wisdom in Creation he founded the idea of an all-powerful and benevolent Creator." This belief is conspicuous throughout his poems, and gives meaning and dignity to the smallest details of description. And in connexion with the poet's personal convictions, it will not be inappropriate to remember what Dr. Johnson calls "the highest praise which he has received "-namely, the comment of Lord Lyttelton, in the prologue to his posthumous play, that his works contained

No line, which dying, he could wish to blot.

### CHAPTER VI

#### GEORGE CRABBE AS A BOTANIST

OF late years there has been a marked revival of interest in the poetry of Crabbe. This may be partly due, as Dr. Ainger has suggested, to the influence of Edward FitzGerald, who was never tired of recommending to his friends The Borough and The Tales. But, however it may be explained, we see evidences of the fact, not only in the way in which many keen thinkers are drawn towards the poet of Aldeburgh; but also in Dr. Ainger's own monograph, in M. Huchon's study of Crabbe and his Times, and in the excellent edition of the poems lately issued by the Cambridge University Press.

It will of course be admitted that from the time when *The Village* appeared in 1783, Crabbe has always appealed to certain minds. Dr. Johnson wrote to Reynolds, "I have read the poem with great delight. It is original, vigorous, and elegant." Burke, we know, was Crabbe's enthusiastic admirer. It was the touching story of Phoebe Dawson that Fox asked to have read to him on his deathbed. During the last sad weeks of his life, as

Scott lay dying in his study at Abbotsford, "the only books he ever called for were his Bible and his Crabbe." Byron spoke of Crabbe in 1820 as "the first of living poets," and in his famous eulogy as "Nature's sternest painter yet the best." In the same high strain of admiration passages might be quoted from Wordsworth and Tennyson, from Jeffrey and Lord Macaulay, and John Henry Newman. "With all its short- and long-comings," wrote Sir Leslie Stephen, "Crabbe's better work leaves its mark on the reader's mind and memory as only the work of genius can, while so many a more splendid vision slips away leaving scarce a mark behind."

It is not my purpose in the present paper to attempt to investigate those qualities which have caused Crabbe's poems to appeal to so many men of critical faculty and discernment. That task has been ably accomplished, among other writers, by Dr. Ainger in his admirable memoir of the poet in English Men of Letters. I simply desire to call attention to one aspect of Crabbe's life, which finds expression in many passages of his writings, and which has never, I believe, been adequately treated by any of his

admirers. I allude to his enthusiastic love of botany. The subject is the more interesting inasmuch as so few of our poets have been men of science. And with this passion for botany there is associated in Crabbe's poems a minuteness of description with regard to natural scenery which is new in English poetry. "Distinctness in painting the common growth of field and hedgerow may be said to have had its origin with Crabbe. Gray and Goldsmith had their own rare and special gifts to which Crabbe could lay no claim. But neither these poets," says Dr. Ainger, "nor even Thomson, whose avowed purpose was to depict nature, are Crabbe's rivals in this respect." And these descriptions of natural scenery, like most of the botanical allusions, are mainly connected with one neighbourhood. Though Crabbe passed his life in many places—for nineteen years he lived in Leicestershire, and for eighteen in Wilts-yet it would hardly be an exaggeration to say that the whole of his writings turn upon Aldeburgh. The little seaside Suffolk town is, of course, the original of The Village and of The Borough. The Parish Register, though composed at Muston, contains a large number of passages which bear on

Aldeburgh. Most of the Tales have more or less association with the same place. And very striking are the descriptions of scenery in the district. Every feature of the coast which stretches between Orford and Dunwich is somewhere or other reproduced in his writings. In The Lover's Journey he has depicted, with wonderful fidelity, the varied scenery between Aldeburgh and Beccles. The "barren heath beside the coast"; "the lanes of burning sand," beside which "the wholesome wormwood grows," and "the dark poppy flourishes on the dry and sterile soil"; the salt marshes, intersected by ditches "with sloping banks of slimy mud," where a "grave Flora scarcely deigns to bloom"; "the rushy moor," where

There are blossoms rare, and curious rush, The gale's rich balm, and sun-dew's crimson blush, Whose velvet leaf, with radiant beauty dress'd, Forms a gay pillow for the plover's breast;

—all are dwelt upon with the eye of a naturalist and a poet, our author realizing, as he says, that "all that grows has grace," that "bog and marsh and fen, are only poor to undiscerning men."

Many are Crabbe's allusions to his native town, on which he clearly loved to dwell with

feelings of affection. There is the famous passage of "almost Spenserian sweetness" at the opening of the *Tales of the Hall*, where the elder brother George, "past his threescore years," returns to settle in his early home, beginning—

He chose his native village, and the hill He climbed a boy had its attraction still.

Or the lines in the Adventures of Richard, which evidently describe the lonely marsh land between Aldeburgh and Orford—

I loved to walk where none had walked before, About the rocks that ran along the shore;

And hear the murmurs of the ocean flood, With not a sound beside, except when flew Aloft the lapwing or the grey curlew, Who with wild notes my fancied power defied And mock'd the dreams of solitary pride.

More striking still is the masterly description in *Peter Grimes* of the tidal river Alde as it flows past Slaughden Quay, with its "bounding marsh-bank" covered with coarse vegetation; with its vast stretches of mud-land, "half covered and half dry," the haunt of gulls and other sea-birds; with the low-lying marshes beyond. Nor, in touching upon our poet's power of depicting natural scenery, must allusion be omitted to several fine pictures of an autumn landscape to be

found in his poems. Tennyson, we know, found it impossible to forget that "singularly beautiful picture" of a late autumn morning, as it appeared to a dejected man, in *Delay has Danger*. The passage is too long for quotation, but many will recognize it from the opening lines—

Early he rose, and look'd with many a sigh, On the red light that fill'd the eastern sky.

Another passage, to be found in the *Maid's Story*, was specially loved by Edward Fitz-Gerald, who was never weary of quoting it to his friends, as an illustration of "how great a poet was lying neglected of men"—

There was a day, ere yet the autumn closed, When, ere her wintry wars, the earth reposed; When, from the yellow weed the feathery crown Light as the curling smoke, fell slowly down; When the wing'd insect settled in our sight, And waited wind to recommence her flight; When the wide river was a silver sheet, And on the ocean slept th' unanchored fleet When from our garden, as we looked above, There was no cloud, and nothing seemed to move.

With these may be associated the lines in *The Patron*, in which, according to no less a critic than Dr. Ainger, the essence of a dank and misty day in late autumn has never by any poet been seized with more perfect truth—Cold grew the foggy morn; the day was brief; Loose on the cherry hung the crimson leaf:

The dew dwelt ever on the herb; the woods Roar'd with strong blasts, with mighty showers the floods;

All green was vanished, save of pine and yew, That still displayed their melancholy hue; Save the green holly with its berries red, And the green moss that o'er the gravel spread.

It appears, from his son's memoir, that it was during his four years' residence at Woodbridge, where he was apprenticed to a surgeon of the town, that George Crabbe first seriously began the study of botany, which passion, his son adds, "from early life to his latest years, my father cultivated with fond zeal, both in books and in the fields." At the expiration of his term of apprenticeship Crabbe returned to Aldeburgh, hoping to find the necessary means of shortly repairing to London, and of there completing his medical education. The money, however, was not forthcoming, and for some four or five years he passed a somewhat miserable existence in his native town, assisting his father among the butter tubs on Slaughden Quay, and at the same time earning a wretched pittance as surgeon and apothecary to the poor inhabitants of the district. Among the borough documents we find this entry under September 17, 1775-

"The Aldbro' vestry orders that Mr. George

Crabbe, jun., shall be employed to cure the boy Howard of the itch, and that whenever any of the poor shall have occasion for a surgeon, the overseer shall apply to him for that purpose."

His passion for natural history now served him in good stead, and he spent much of his leisure time in searching the district around —the seashore, the marshes, the heath-lands between Thorpe and Dunwich-for rare insects and plants. His love of botany was, however, in one sense injurious to his success; for we are told that his ignorant patients, seeing him return from his walks with handfuls of weeds, decided that as Dr. Crabbe got his medicines in the ditches he could have little claim to payment. In the summer of 1778 he made the acquaintance of the Colonel commanding the Warwickshire Militia, at that time quartered in the town, from whom he received many kindnesses. Among other gifts Colonel Conway presented him with a copy of Hudson's Flora Anglica, then the standard work on British plants. At length, however, utterly disheartened by his uncongenial surroundings and the apparent hopelessness of his career, he determined to go to London.

One gloomy day, towards the close of the year 1779, he had strolled [his son tells us] to a bleak and cheerless part of the cliff above Aldeburgh, called "The Marsh Hill," brooding, as he went, over the humiliating necessities of his condition, and plucking every now and then, I have no doubt, the hundredth specimen of some common weed. He stopped opposite a shallow, muddy piece of water, as desolate and gloomy as his own mind, called the Leech-pond, and "it was while I gazed on it," he said to my brother and me, one happy morning, "that I determined to go to London and venture all."

We need not dwell upon the weary period of distress and poverty which followed, when "want stared him in the face and a gaol seemed the only refuge for his head." This painful time was at last relieved by the notice and friendship of Edmund Burke, under whose patronage Crabbe was enabled to publish *The Library*, which marked the turning-point in his career. Acting on the advice of his powerful friend, our poet also determined to relinquish the profession of medicine for that of theology; and shortly afterwards he was ordained by the Bishop of Norwich to the curacy of his native town.

From henceforth Crabbe lived the life of a country parson, partly, after a few months spent at Aldeburgh, in Leicestershire—as chaplain to the Duke of Rutland at Belvoir Castle, as curate of Stathern, and as Rector of Muston; then for some thirteen years in

Suffolk, serving the curacies of Sweffling and Great Glenham; and, finally, for the last eighteen years of his life, as Rector of Trowbridge, in Wiltshire. His son tells us that in after years Crabbe often said that the four years he spent at Stathern were the happiest in his life. Accompanied by his young wife, he would spend long days in wandering through the deep glades and secluded paths of the surrounding woods, catching beetles and moths and butterflies, and collecting botanical specimens. Like his own "village priest" in the Tales of the Hall

He knew the plants in mountain, wood, and mead;
... all that lived or moved
Were books to him; he studied them, and loved.

During this period he contributed a chapter on the natural history of the Vale of Belvoir to Nichol's account of Leicestershire; just as afterwards, during his residence in Suffolk, he prepared for Loder's History of Framlingham, and for the Botanist's Guide, catalogues of local plants, which contained many species new to the county. Both in Leicestershire and Suffolk, a portion of his garden was devoted to the cultivation of rare British plants; and just before leaving Muston he was busily engaged in laying out a new botanical garden. He would also, we learn

from his son's memoir, copy out with his own hand portions of expensive works on botany " of which his situation could only permit him to obtain a temporary loan." Several of these botanical note-books, through the kindness and courtesy of Mr. John Murray, I have lately had the great satisfaction of carefully examining. Written in the most exquisitely clear and beautiful handwriting, they consist for the most part of extracts from scientific Transactions, and from costly books on botany. We meet with extracts from Curtis's Flora Londinensis, and from the Transactions of the Linnæan Society; with observations on mosses, grasses, and the germination of ferns; with notes on "a New Method of Preserving Fungi," on "Four New British Lichens," by the Rev. Hugh Davis, on "Plants newly found in Scotland," by Mr. Dickson. It is clear from the notebooks that the poet was mainly interested, as indeed his son tells us, in the Grasses. Sedges, and Cryptogams. One note-book contains fifty pages-written in the same exquisite handwriting—of descriptions of British Fungi from Withering's Botany; another deals with the Sedges, and also includes long extracts from Withering on English

Sea-weeds. Now and again we meet with a note on the medicinal virtues of plants, doubtless an interesting aspect of botany to one who had practised as a village apothecary. He notes that Mr. Gataker, surgeon of Westminster, recommended the dried leaves of the black nightshade (Solanum nigrum, L.), powdered, as a remedy for dropsy, "but this was not found to answer on trial." Again, we read that "experiments with the exprest juice of Galium aparine in cancers have failed." These note-books are disappointing in the sense that they contain few local allusions, but they reveal in the most striking manner the poet's rare interest in botany.

At one time, apparently during his residence in Suffolk, Crabbe wrote an English treatise on botany, which most unfortunately was never published. It appears that the work when almost completed was committed to the flames, in consequence of the remonstrances of one Mr. Davis, the Vice-Master of Trinity College, Cambridge, who could not brook the idea of "degrading the science of botany by treating of it in a modern language." The reason for the destruction of the manuscript becomes the more strange when it is remembered that Withering's Arrangement

of British Plants, which superseded Hudson's Flora Anglica, and from which, as we have seen, Crabbe had made copious extracts, had appeared only a few years before in the same unorthodox language. We learn from the son's memoirs, that the poet used sometimes regretfully to say that had the Treatise appeared at the time his friend arrested its progress, he might have had the honour of being considered the first discoverer of more than one addition to the British Flora. He used specially to mention the rare little seaside clover, now known as Trifolium suffocatum, of which he always claimed to be the first discoverer in Britain. The plant, it appears, was first recorded as growing in England in 1792, while the exact date of Crabbe's discovery is unknown. But writing in 1794 to a botanical friend, he says: "I found at Aldeburgh Pisum maritimum (seaside everlasting pea), Chelidonium Glaucium (yellow horned poppy), Statice Armeria (common thrift), and many trefoils, some very scarce kinds: but one day I met with a plant that is new-no author describes it." A specimen of this new plant was sent to the distinguished botanist, Sir Joseph Banks, who identified it as Trifolium suffocatum, L. In a

letter accompanying the specimen Crabbe wrote: "The plant grows at Aldeburgh in Suffolk in a very dry soil, over which the sea passed in an unusually high tide, about twelve years since, and destroyed the vegetation for some time after." It is unfortunate that we do not know the date of the "one day" above italicized when the poet first found the new trefoil on the beach at Aldeburgh, but it is clear that he always regarded himself as its original discoverer in England. The specimen sent by Crabbe to Sir Joseph is still preserved in the Banks Herbarium in the British Museum at South Kensington.

Turning now more specially to Crabbe's poetical works, we notice that the main botanical allusions are to be found in those poems which have the most distinct associations with Aldeburgh, such as The Village, The Borough, and The Lover's Journey. But mention must first be made of the marvellous skill with which, in one of the Tales of the Hall, he marshals the technical botanical terms. The "Preceptor Husband" is attempting to teach his bewildered lady the rudiments of the science—

He showed the flowers, the staminæ, the style, Calix and corol, pericarp and fruit,

And all the plant produces, branch and root; Of these he treated, every varying shape, Till poor. Augusta panted to escape, He showed the various foliage plants produce, Lunate and lyrate, runcinate, retuse; Long were the learned words, and urged with force, Panduriform, pinnatifid, premorse, Latent and patent, papulous and plane— "Oh!" said the pupil, "it will turn my brain."

In The Borough we are introduced to his "friend the Weaver," with whom doubtless Crabbe had made many an expedition in the neighbourhood of Aldeburgh, in search of insects and rare plants, who "both his Flora and his Fauna knew," and whose special delight was in the study of entomology. To the "shady grove" he makes his way, "eager he looks," and soon his eyes are gladdened with the sight of "bright troops of virgin moths and fresh-born butterflies"—

Above the sovereign oak a sovereign skims, The Purple Emp'ror, strong in wing and limbs; There fair Camilla takes her flight serene, Adonis blue, and Paphia, silver-queen.

Many are the allusions—some of considerable interest—to the flora in the neighbourhood of Aldeburgh, from "the rank weeds that every art and care defy" to the more "curious plants" of the district. The weeds of cultivation in "the fields of thin-set rye," the flora of the fens and marshes towards Orford,

the wide barren heathlands which stretch beyond Leiston Common towards Dunwich, where

The neat low gorse with golden bloom Delights each sense, is beauty, is perfume; And the gay ling, with all its purple flowers, A man at leisure might admire for hours—

all are noticed with precision and delight. Even the coarser plants, which found a home in waste places within the bounds of the borough, outside, for instance, the palings of cottage gardens,

Where thrift and lavender, and lad's-love bloom, come in for special and minute mention—

There, fed by food they love, to rankest size, Around the dwellings docks and wormwood rise; Here the strong mallow strikes her slimy root, Here the dull nightshade hangs her deadly fruit; On hills of dust the henbane's faded green, And pencil'd flowers of sickly scent, is seen; At the wall's base the fiery nettle springs, With fruit globose and fierce with poison'd stings; Above (the growth of many a year) is spread The yellow level of the stone-crop's bed; In every chink delights the fern to grow, With glossy leaf and tawny bloom below: These, with our sea-weeds rolling up and down, Form the contracted Flora of the town.

Some of these allusions are of distinct interest to a botanist. In the summer of 1906 I visited Aldeburgh for the express purpose of

comparing the flora of to-day with what it was when Crabbe described the borough. Most of his species still remained. Docks and wormwood and mallow and the yellow stonecrop abounded, and if by the "dull nightshade" the poet meant the black nightshade (Solanum nigrum) that, too, was abundant. The deadly nightshade (Atropa belladonna) is a very rare plant in Suffolk; still Crabbe found it among the ruins of the grand old castle of Framlingham, but had it occurred at Aldeburgh he would doubtless have mentioned it in the notes he supplied for the Botanical Guide. The henbane, too, is a scarce plant, and in former times was much sought after by those who "culled simples," for its supposed medicinal properties; and Crabbe doubtless often gathered it in the days when he was surgeon to the borough. To my delight I came across several specimens of this sickly-looking plant, which, as an old herbalist rightly says, " has a very heavy, ill, soporiferous smell, somewhat offensive." It was growing on waste ground near the lighthouse, and also at Slaughden Quay. From his description of the "fiery" nettle with "fruit globose," there can be little doubt that our poet meant the Roman nettle

(Urtica pilulifera, L.), at once distinguished from the common kinds by its globulous heads of female flowers, and by the intense virulence of its sting. This is now a very rare plant, and is probably extinct in Suffolk; but it is interesting to know that the celebrated botanist, John Ray, found it at Aldeburgh, towards the end of the seventeenth century; and it was also noticed there in 1774, by a contemporary of our poet. Interesting, too, is the allusion to the little wall-ferns which "in every chink delight to grow." In another "Letter" of The Borough, Crabbe refers to the "long-enduring ferns" which managed to maintain an existence on the grey walls of Aldeburgh church, and which showed "Flora's triumph o'er the falling tower." The delicate little wall-rue fern (A. Ruta-muraria, L.) may still be seen in its old position; it is also abundant on an ancient tomb, close to where Crabbe's father and mother lie buried; while all along the north side of the churchyard wall it is plentiful between the interstices of the stones.

The poor nature of the soil in the near neighbourhood of the sea comes in for frequent mention in the Poems. Crabbe refers again and again to the "lengths of burning sand,"

Where thistles stretch their prickly arms of war, and

Where the blue bugloss paints the sterile soil. Nor are the Suffolk hedgerows forgotten, where grow

The crab, the bramble, and the sloe, The hyp, the cornel, and the beech, the food And the wild solace of the gipsy brood.

More interesting, botanically, is his description of the marsh-flora to be found in the neighbourhood of Slaughden Quay, where "samphire-banks and saltwort bound the flood"; and where

The few dull flowers, that o'er the place are spread Partake the nature of their fenny bed; Here on its wiry stem, in rigid bloom, Grows the salt lavender that lacks perfume; Here the dwarf sallows creep, the septfoil harsh, And the soft slimy mallow of the marsh.

With reference to the samphire, Crabbe adds a note that the jointed glasswort (Salicornia) is meant, not the true samphire, Crithmum maritimum, L. This latter plant, still as abundant on Shakespeare's Cliff at Dover as when King Lear was written, had not been recorded for Suffolk in Crabbe's time; but several large patches of it were flourishing on the muddy shore near the mouth of the River Orwell last summer. The glasswort is still called samphire in Suffolk, and is

gathered for purposes of pickling. I noticed a large basket of it exhibited for sale as "samphire" on the stall of a fishmonger's shop in Westgate Street, Ipswich, not long since, and was told that it made a most excellent pickle. The salesman seemed much surprised when I ventured to remark that his so-called samphire was only the jointed glasswort. There is also a note attached by the poet himself to his description of the fen-flora in *The Lover's Journey*, which as an illustration of his interest in botany is worth quoting—

A fat-leaved, pale-flowering scurvy-grass [he writes] appears early in the year, and the razor-edged bull-rush in the summer and autumn. The fen itself has a dark and saline herbage; there are rushes and arrow-head, and in a few patches the flakes of the cotton-grass are seen, but more commonly the sea-aster, the dullest of that numerous and hardy genus; a thrift, blue in flower, but withering and remaining withered till the winter scatters it; the saltwort, both simple and shrubby; a few kinds of grass changed by their soil and atmosphere, and low plants of two or three denominations undistinguished in a general view of the scenery; such is the vegetation of the fen when it is at a small distance from the ocean. In this case [he adds] there arise from it effluvia strong and peculiar, half-saline, half-putrid, which would be considered by most people as offensive, and by some as dangerous; but there are others to whom singularity of taste or association of ideas has rendered it agreeable and pleasant,

In addition to those species mentioned by

Crabbe as forming "the grave Flora" of the fen, all of which may still be found in the neighbourhood of Aldeburgh, several other rare and notable plants are associated with his name. On the "vast baich of stones." which runs for twelve miles or more from Aldeburgh to Hollesley Bay, one of the most remarkable ledges of shingle to be seen on the British shore, Crabbe found near the Orford Lighthouse, that most scarce species, Diotis maritima, Cass., or the sea cottonweed. The plant, which is densely covered with a white cottony wool, is now doubtless extinct in Suffolk, perhaps in England; but in former years it appears to have been known in many localities along the English and Welsh shores, and is mentioned by Gerarde, Ray, and others of the early botanists. It is interesting to know that Crabbe met with it, and in so romantic a situation. Two other very scarce plants, now all but extinct in England, he found in the fen-ditches near Beccles, the marsh sow-thistle (Sonchus palustris, L.), and the marsh cineraria (Senecio palustris, DC.). The former of these, a tall stout species growing, says an old herbalist, "to a man's height or more," was at one time not uncommon in certain districts of East

Anglia, but it has now almost entirely disappeared in consequence of the draining of the fens. The same cause is also responsible for the extreme rarity of the marsh cineraria. It may likewise be noted that our poet found the mousetail (Myosurus minimus, L.), a "rare little plant, at Parham, in a wet meadow, under the trees"; and Anchusa sempervirens, L., or the evergreen alkanet, "a rare plant in Suffolk, by the old road to Parham, after you pass the run of water, before the first houses on the right hand"; and the sickle medick (Medicago falcata, L.) both at Orford, and in the "old Church Yard at Dunwich."

One other species in connexion with the poet must, in conclusion, be mentioned. The most interesting plant in the Suffolk Flora, from its historical and legendary associations, is, as we have noticed in a former chapter, the sea-pea (*Lathyrus maritimus*, *Big.*). A specimen of this plant, pressed and mounted by the poet himself, and with the label in his own exquisite handwriting duly attached to it, was exhibited among his relics in the "Crabbe Celebration" held at Aldeburgh in the autumn of 1905.

#### CHAPTER VII

THE RECREATION OF JOHN STUART MILL

LITTLE do the readers of Principles of Political Economy suspect that John Stuart Mill was a rare lover and seeker of wild flowers; and that to the study of them after "the bitter calamity" of his wife's death, he turned for solace and interest in his home at Avignon. There are, it is true, several allusions in his Autobiography to his "love of rural objects and natural scenery," to which, he tells us, he was indebted for much of the pleasure of his life. He notes his earliest recollections of "green fields and wild flowers" associated with the lanes about Hornsey, then an almost rustic neighbourhood. At the age of seven he accompanied his father on an excursion into Devonshire, where he acquired his "first taste for natural scenery." His discovery as a young man of Wordsworth he regarded as "an important event in his life," so deeply did the poet's teaching appeal to his own love of nature. For many years Mill would pass his Sundays in "taking long rural walks" in the neighbourhood of London;

while his month's holiday from the India House was usually spent in walking tours, alone or with friends. This much we learn from his Autobiography, but no hint is given as to the purpose of those expeditions, beyond the love of country life. We find, however, from the pages of The Phytologist, a botanical miscellany, the first number of which appeared in 1844, and to which John Stuart Mill occasionally contributed, that he was at that time, and had been for many years, an ardent field-botanist, delighting in long country rambles in order to find rare plants.

His interest in botany dated from a visit of some months' duration, which, when a lad of fifteen, he paid to Sir Samuel Bentham at his château in the South of France. Sir Samuel's only son was George Bentham, whose *Handbook of the British Flora* is well known, and it was under his influence and guidance that John Stuart Mill began that fascinating study in which he afterwards found such unfailing delight. On his return to England a fresh zest was thus added to those long country walks to which from early childhood he had been accustomed; and he began to form the valuable collection of British plants

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which he afterwards presented to the Royal Museum at Kew. His botanical researches in England were chiefly in Surrey and Hants, where he made many and, in some instances, notable discoveries. Indeed the Flora of Surrey owes much of its interest, from a literary standpoint, to its intimate association with John Stuart Mill. In 1822, soon after his return from France, Mill, a lad of sixteen, found the strange plant Impatiens fulva, or the tawny touch-me-not, growing sparingly on the banks of the Wey, near Guildford. This seems to have been the earliest record of this beautiful North American balsam with orange-yellow flowers spotted with red in this country. How the plant originally found its way to Surrey is unknown, but it quickly settled there. Writing some years later, Mill speaks of it as abundant for many miles by the side of the Wey both above and below Guildford, and as "equally abundant on the banks of the Tillingbourne, especially at Chilworth, where it grows in boundless profusion." It is well to know that this naturalized species still flourishes in Surrey in several spots, although, strange to say, it does not seem to have spread beyond the county.

Another rare and most interesting plant recorded by Mill, and still to be found where he discovered it, is the woad, concerning which "Cæsar saith," in the language of old Gerarde, "that all the Brittons do colour themselves with woad, which giveth a blew colour." This famous plant, associated with our earliest history, is now only to be found, in a truly wild state, in one place in England, where on some almost perpendicular cliffs overlooking the river Severn it flourishes as it did in the days of the ancient Britons. But in several places the woad, like the American balsam, has become naturalized, and among these must be reckoned Mill's locality. On June 1, 1841, he found it "growing in prodigious luxuriance in the chalk-quarries, close to the town of Guildford." It grows, he adds, "in many instances out of clefts in the precipitous chalk cliff, and makes almost a bush of flowers from the same root." The woad happily remains, and every summer its fine crowded panicles of yellow blossom may be seen in the Guildford quarries; but many of the choice plants which gladdened the eyes of our philosopher only half a century ago have now become exceedingly scarce, while some, it is to be feared, have disappeared.

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In his day the splendid Royal fern, Osmunda regalis, now seldom met with in the south of England, grew in the swampy woods north of Coldharbour, near Dorking, so as to form "large and tall thickets visible at a great distance." It would now be difficult, perhaps impossible, to find a single plant. Among our British orchids, of which we have in all some thirty-seven species, the manorchis (Aceras anthropophora) ranks with the choicest and most rare. But in the middle of the last century it appears to have been fairly common. Indeed Mill records it as growing "profusely on Colley and Buckland Hills, and between Box Hill and Juniper Hill," and in other localities in the neighbourhood. This fine plant has now become very scarce in Surrey, while from Hampshire it has, it is to be feared, quite gone.

"Some few years before 1841" Mill made a botanical expedition into the New Forest, where he noticed and recorded many curious plants. Among these may be mentioned the beautiful grass of Parnassus which he saw growing in "various parts of the Forest." Strange to say, this record remains unverified. Never by any other botanist has the grass

of Parnassus been found in the Forest. Can it have disappeared, or was the philosopher mistaken? If the visit took place in the spring before the plant was in flower it is not impossible that the leaves of the small marsh valerian were mistaken for those of the grass of Parnassus. Such a mistake by a well-equipped botanist is actually on record. But if doubt may be cast upon the discovery of Parnassia, it is not so with another scarce plant which Mill found in the Isle of Wight. On the sandy shore of Sandown Bay he came across a single specimen of the purple spurge. This rare Atlantic species, found in Great Britain only in one or two spots in Cornwall and South Wales, had never before been met with so far eastwards. But there is no doubt as to its identity. Mill gave the plant to the author of the Flora Vectensis, and it is still preserved—the most interesting specimen alike on account of its rarity and its finder -in the collection of island plants in the Bromfield Herbarium.

After the sudden death of his wife at Avignon in 1859, John Stuart Mill bought a cottage as close as possible to the place of her burial, and there he chiefly lived during the rest of his life. The rich neighbourhood

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of his new home was as carefully searched for rare and beautiful species as had been Hampshire and Surrey in former years. He gathered together a large amount of material with a view to publishing a *Flora of Avignon*; and only three days before his death walked fifteen miles on a wild-flower expedition.

In thus finding a recreation in botany, John Stuart Mill shared with many other distinguished men a simple taste which is marvellously fascinating to those who possess it. The Confessions of Rousseau contain a number of passages in which the philosopher dwells with affection upon the pursuit which brought him unfailing solace and pleasure. Goethe may be added to the same roll of happy enthusiasts. The poems of Crabbe, as we have seen, afford abundant evidence of the diversion which beguiled the somewhat dreary life of the author of The Borough. Arnold of Rugby used to say "wild flowers are my music," and in one of his letters he speaks of the deep delight with which he looked at woodanemones or wood-sorrel, "loving them as a child loves them." Readers of Dr. Hort's Life and Letters will remember the keen

interest which this great Biblical critic took in the Alpine flora around Saas-Fee. These men, as the old herbalist would say, were "diligent searchers after simples," and the search unfailingly refreshed them.

#### CHAPTER VIII

#### THE RECTOR'S GLEBE

From time immemorial the pastures known as "Church Meadow" and "Hither Walk" with the coppice beyond have belonged to the Rectors of Drokenforde. When the Doomsday record was made, the manor was held by the Bishop, and a Saxon church stood in one corner of the glebe. And since then we may be allowed to associate the pleasant meadows which slope towards the river Meon with the successive Rectors who have held the living. The names of many of them are lost in oblivion, but some five-and-twenty are known. Of these the most interesting is that of Dr. William Hawkins, the son-in-law of Izaak Walton. The author of The Compleat Angler often stayed at the Rectory, where, as we learn from his "last will and testament," many of his books and belongings were kept. He must frequently have wandered over the glebe, "chequered in spring with water-lilies and ladysmocks," down to the "swift, shallow, clear brook," sometimes alone with a fishing-rod

in his hand, and sometimes in company with one of his friends—with Mr. Francis Morley perhaps, who lived at the Manor House hard by and to whom he left a ring, or with Thomas Ken, his near relative by marriage; or more certainly with his little grand-daughter, Anne Hawkins, to whom "sitting under a willow-tree by the water-side" he would doubtless preach lessons of "sweet content." In those days the secret subterranean passage which tradition says ran from the Manor House, beneath the glebe meadows, to the "Palice-mead" beyond, where a mansion or monastery is said to have stood, was doubtless known to the villagers, who still love to talk, in hushed voices, of the mysterious way. We may think, too, of Mr. Nicholas Preston, "the sequestered minister" in the days of the Commonwealth, wandering sadly over the pastures, which were rightly his, and listening to the owls hooting in the twilight as they issued from the old church tower. Mr. Robert Webb, too, the Puritan preacher, who is said to have been a good man and eminent in the pulpit, had possession of the glebe for ten years, and, if such frivolities were not beneath his notice, must have often hearkened to the nightjars of a summer's

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evening, and watched the moorhens and dabchicks in the stream below.

In one corner of the glebe a stone monument will be seen, some six or seven feet in height, and of not inelegant design. It was erected in 1789, to the memory of Lewis Stephens, D.D., Rector of the parish, who at his death in 1746 left a strip of meadowland, known as "Longmead," to his successors in the living "for the term of five hundred years." The said narrow strip of land lies directly between "Church Meadow" and "Hither Walk"; hence the appropriate Latin inscription adapted from Horace, inscribed on the monument, which may be rendered as follows: "Thanks to the gift of you intervening meadow, my little Glebe is now four-square." The meadow which borders the river Meon, is at times little better than a swamp, and from an old map in my possession seems to have been formerly an osier bed. For agricultural purposes it is of little value, the herbage being rank and mixed with coarse rushes and sedges; but from the point of view of a naturalist "Longmead" is a most interesting addition to the Rector's glebe.

During the breeding season "Longmead" is usually tenanted by several pairs of peewits,

and the "drumming" of snipe is a familiar sound. The nest of a wild duck may perhaps be found in the tall tussocks of grass and rushes which occupy the swampier portions of the ground, and more than one moorhen's nest may always be seen. As autumn approaches, large numbers of sea-gulls make their appearance on the glebe, and dabchicks frequent the stream. The stately heron becomes a constant visitor, and adds much dignity to the quiet surroundings. Now and again rarer species will show themselves. Some years ago, during a severe frost, a strange bird was noticed among the tall reeds which skirt the river. It was shy, and difficult of approach; but at last it fell a victim to the gun. It proved to be a fine specimen of the common bittern, a bird never since met with on the Rector's glebe. Once, too, for several weeks, a hoopoe frequented the spot, to the intense delight of the keen ornithologist who then held the living.

A "gentle walk" leads from the Rectory to the river, now as in the days of Izaak Walton full of "store of trouts." Indeed, as many as forty fine fish might be counted last season from the rustic bridge which spans the stream. Strange to say, the may-fly, which

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is common enough a mile below, has never yet been seen on the water which flows through the Rector's glebe. On the banks water-voles abound, and now and then an otter comes up the river. Indeed, the glebe is a veritable sanctuary for wild creatures. The pasture is covered with mole-hills. If you listen attentively you may perchance hear "the hedge-pig whine." On a summer's evening the great bat, first noticed by Gilbert White of Selborne, will be hawking for insects above the lofty elms. Dormice are plentiful among the tangled vegetation of the hedgerows. Squirrels, too, may occasionally be seen, and hares are frequent visitors; but the badger has ceased to haunt the quiet haven of the Rector's glebe. Still, not half a mile distant is "Brock Bridge," named doubtless after the harmless animal which, in former years, had its burrow in the immediate vicinity.

Beyond "Hither Walk" the long belt of beech-trees begins which leads to a neighbouring Rectory about a mile distant. The story goes, and seems to be well substantiated, that the trees were planted about one hundred years ago by the respective Rectors of the two parishes. The Rectors, it appears, were fast friends, and moreover

were connected by marriage, and being persons of considerable wealth—one of them held five livings in addition to a canonry at Winchester—they determined to plant a shady grove which should connect the two establishments. The "Beech Walk," as it is called, now forms a conspicuous feature in the landscape, and contains a number of fine trees, some of large size. Our pluralist-Rector, who is the "Parson Poulter" of Cobbett's Rural Rides, was a great tree-fancier, and withal a botanist of some repute. His former garden on the banks of the Meon can still show a fine catalpa, a large Judastree, a beautiful deciduous cypress, and several lofty tulip-trees of his planting. A list of wild-flowers, too, remains, which in conjunction with his friend's brother, who afterwards became Dean of Winchester, he drew up as growing on the Rector's glebe. Among these a most interesting example may be mentioned. There flourished in those days, more than a century ago, not far from the old water-mill, Thalictrum flavum, or the yellow meadow-rue. It is a plant I had never met with during many years' diligent botanizing. Inspired by the Rector's entry, I carefully examined the

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ancient glebe; and there, doubtless on the very spot that "Parson Poulter" had noticed it some time before the year 1799, the graceful plant, with its finely-cut leaves, was in full flower last summer. It is said that the exceedingly rare coral-root (Dentaria bulbifera) was once found in the thick hedgerow which borders "Church Meadow," not far from the spot where year by year the green alkanet (Anchusa sempervirens) puts forth its rich blue blossoms—perhaps its only habitat in the county of Hants.

A "right-of-way" now exists through the "Beech Walk," which is nevertheless the haunt of a number of wild creatures. One winter a fox made his home there for several weeks. The smaller birds abound. Two or three species of tits—the blue-tit, the oxeye, and the cole-tit—are always present, and most likely a colony of those exquisite little creatures, the long-tailed tits. There is mostly a bullfinch about the coppice; and thanks to the Wild Birds' Protection Act, goldfinches are no longer rare. Sometimes, in hard winters, large flocks of wood-pigeons roost in the lofty beech-trees; and a number of finches congregate in the shelter of the underwood. Among these a few bramblings

may mostly be found. During the severe weather of last January a goodly number of these interesting winter visitors might be seen under the beeches, searching for the fallen mast, which is a favourite food in frosty weather. The male brambling is a hand-some bird, and may be at once distinguished from the chaffinch, which he somewhat resembles, by his slightly larger size, and by the whitish patch on the lower part of the back, which is very conspicuous when the bird is on the wing.

## CHAPTER IX

#### THE OLD HERB-GATHERERS

HALF-WAY down the village street, on a strip of common-land such as formerly bordered so many of our country roads, there stands a dilapidated cottage almost hidden from view behind a tangled thicket of brambles and apple-trees. It was inhabited not long since by a strange and independent couple, who in their earlier days had made a living by selling herbs and flowers in the neighbouring town. The spot in the High Street is still pointed out where, for nearly half a century, 'Liza was wont on market-days to take her stand with her basket of roses and sweetwilliams; and the quack medicine-shop, off the main thoroughfare, may still be seen, with thick briony-roots and bunches of dried herbs in the window, where she was accustomed to dispose of her "simples," in search of which she would tramp the country for many miles around.

A few winters ago, when all the village was down with influenza, the old herb-gatherers,

both of them nigh on eighty, caught the infection, and lay dying, as the doctor thought, in their miserable room upstairs. And as they lay, with no daughter or relative to nurse them, one on an old wooden bedstead and the other huddled up on a mattress upon the floor, something seemed to weigh upon their minds. They had always been a curious couple, and strange stories were whispered about them. In her younger days 'Liza must have been exceedingly handsome, tall and straight, and with delicately chiselled features. Even in her old age she bore distinct traces of good looks, and had a certain hauteur, the outcome, no doubt, of the admiration she had received as the prettiest flower girl in the town. Old "Garge," too, was a picturesque figure, with his wrinkled face and black eyes-wonderful eyes, with all the brightness and fire of youth in them, and a good deal suggestive of more doubtful qualities besides. In his sealskin cap and waistcoat he might for all the world have stepped straight out of one of Rembrandt's pictures.

The cottage, which belonged to them, presented an extraordinary appearance. It was almost in a state of ruin. The rain poured

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in through the broken tiles; the staircase had partly fallen in; and long festoons of ivy had found their way into the upper rooms. But the dilapidated condition of the hovel only served to render its contents the more striking. Valuable pieces of old china. antique clocks, and other curiosities lay about the place in dire confusion, in company with empty gin-bottles, heaps of halfrotten apples, potatoes, firewood, bits of rusty iron, and other rubbish. Several fine specimens of old oak furniture stood in the room downstairs, including one or two carved chests containing silk dresses, kid shoes, Paisley shawls, and yards of costly satin and velvet. One box in the bedroom was full of trinkets, gold and silver watches, bracelets, brooches, chains, lockets, snuff-boxes, earrings, and other odd pieces of jewellery. Rats swarmed over the place, and gnawed the shoes, and broke the old china on the dresser, in spite of half-a-dozen tortoiseshell cats, which were equally at home on a sack before the wood fire, on the parlour table, or asleep on the bed upstairs. The place was a strange medley, indeed.

Well, the old couple lay helpless, and two or three times a day I visited them, and did

what little I could to comfort them. 'Liza's eyes were bad, and needed bathing, and she had a fancy for me to do it. They were both apparently dying, and, as I have said, something seemed to trouble them. At last, after many days, the secret came out. In turning over the old man a heavy bag of money was found under his grimy pillow. This discovery loosened 'Liza's tongue. She intimated where, unknown to her husband, other treasure was concealed. After much searching another leathern bag full of gold pieces was discovered between the mattresses. Altogether, coins to the value of over £600 were found in that wretched abode, to say nothing of the trinkets and costly raiment which the old woman had accumulated. The gathering of "simples" had evidently been a lucrative occupation.

Contrary to expectation, they both recovered and dragged on for some time longer their miserable existence. Some of their money, they fancied, was stolen when they were sick, and the belief embittered their last days. At times they wrangled sadly, and the spirit-bottle was too frequently replenished. 'Liza's eyesight, too, was all but gone, and she fretted over it. One day, when I looked in

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to read to her, she said she would like to try the hospital, if so be she could get there. So, clad in a fawn-coloured silk gown of the fashion of fifty years ago, selected from the hoard in one of the oak coffers, she was taken in the village fly to the hospital at the great town, not far from the spot where, in her younger days, she had sold her flowers and medicinal "harbes." But surgical science could do nothing to help her, and after a brief sojourn she came back to her miserable home to die. A few weeks later the end mercifully came; and as she lay in her coffin -it was a hard matter to keep the cats out of the room—the old man, with a touch of the affection of earlier years, went into the garden at the back of the dwelling and cut a long spray of China roses, and saying to me, "'Liza allus loved flowers," he arranged it in the coffin round her head. We then once more chased the cats out of the room, and, shutting the door safely, I left the poor old fellow to his thoughts.

For some two years longer "Garge" lingered on. He would have no one to "do" for him, and the state of his cottage became worse and worse. He grew more and more suspicious and morose, and the neighbours were afraid

to go near him. At last he took to his bed, and for many weary months he lay alone in the dismal chamber upstairs. The rain and snow found an entrance through the broken roof, the wind whistled through the shattered casements, the shivering paper hung loosely from the crumbling walls; but for these things the old herb-gatherer cared nothing. There he lay, in his sealskin cap, upon the large wooden bedstead, with a horse-pistol, a rusty sword, and a bottle of spirits by his side, and one or two cats to keep him company. In vain I tried to persuade him to have a woman in the house. He would have no one except for an hour every morning; he had been robbed once, he said, and you couldn't trust nobody. He had still plenty of gold pieces, and the authorities could not interfere. So there he lay, week after week, till one bitter day in January, a boy came to tell me that "Garge" was dead-found dead that morning in his bed.

I at once went down to the hovel, which I found in charge of the village constable, to take a last look at my queer old friend. Very peaceful, even noble, he looked with his long white hair and sharply cut features, as he lay amid his strange surroundings,

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with the pistol and sword beside him on the bed, in the kind arms of our Sister Death. His long life was over, with its dark suspicions and bitter thoughts; and all his cherished possessions, the Chelsea china, the oak furniture, the Paisley shawls. would soon find their way into the auctionroom. The gold coins, of which a large number still remained in the leather bag, would be spent by others, and the hovel on the waste would doubtless be pulled down. The old-fashioned garden, now white with snow, in which for many years, he and 'Liza had grown their wallflowers and sweet cloves, would pass into strangers' hands, and the China rose-tree from which he had cut that funeral spray for his wife's coffin would be rooted up. But these thoughts troubled him not. There he lay, calm and still, and a smile of satisfaction had settled on his countenance. Perhaps he had met 'Liza in that other garden where everlasting Spring abides and never-fading flowers.

#### CHAPTER X

#### SELBORNE IN EARLY SPRING

In the days of Gilbert White the village of Selborne was difficult to approach during the winter months. The "hollow rocky lanes" which led to Alton and to Wolmer Forest respectively were "more like water-courses than roads," and were bedded with naked rag for furlongs together. In places they ran some sixteen or eighteen feet below the level of the fields, and were so narrow that wagons could not pass except at certain places. The rough road, or cartway, to East Tisted was little better, and was almost impassable in bad weather. As an illustration of the conditions of travelling we find in White's Garden Kalendar the significant entry under March 15, 1756: "Brought a four-wheel'd postchaise to ye door at this early time of the year." In this respect Selborne is much changed for the better. Good roads now run from the Pleistor in several directions, and there is no difficulty in reaching the historic village. A visit to Selborne in the early days of spring has for the botanist a peculiar interest.

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For though the study of plants did not attract Gilbert White to the same extent as ornithology, yet in all branches of natural history he took a keen interest. His copy of Hudson's Flora Anglica, the standard flora of the eighteenth century, is fortunately still in existence, in which he marked no less than 439 plants as occurring in the parish of Selborne. Moreover, in one of his letters to Danes Barrington he gives a "short list of the more rare plants discovered within our limits," and in this list several of the most striking species blossom in the early months of the year. Among these may specially be mentioned the two hellebores and Daphne Mezereum. The letter was written in 1778, just 130 years ago, and it would be an occasion of much interest to discover how the changes of time have dealt with these rarities of the Selborne flora. For the village itself has greatly changed. If Gilbert White could revisit his ancient haunts he would scarcely recognize "the one single straggling street, three-quarters of a mile in length, running parallel with the Hanger," so many new houses have been built. His old home, too, has been considerably altered and enlarged. Still, his study and bedroom

remain unchanged, and out in the garden may be seen several objects associated with the great naturalist. His brick pathway across the lawn is carefully preserved. The "Ha-ha-wall built of blue rags" still divides the park from the garden, while on the lawn stands his sundial, the column of which, he tells us. "came from Sarson House, near Amport, and was hewn from the quarries of Chilmarke." And the natural features of the parish remain as in the eighteenth century. The glorious Hanger is still covered with beeches, "the most beautiful," as White thought them, "of forest trees." The pathway down the Lyth, much beloved of our naturalist, is as quiet and sequestered as when he wandered there. The "hollow lanes," to which we have alluded, still abound with Filices and other "curious" plants. The noble yew tree, which White thought to be coeval with the church, the trunk of which measures over twenty-five feet in circumference, still guards the churchyard, and in early spring "sheds clouds of dust, and fills the atmosphere around with its farina." In White's time the Daphne Mezereum grew on "Selborne Hanger among the shrubs the south-east end above the cottages."

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There is also a record of its being found there as late as the year 1850. Now I fear it must be reckoned among the extinct plants of Selborne. Many a season, in the month of February, or early in March, had I searched the brushwood above the Hanger in vain. Once again I ascended the Hanger by the famous zigzag path, made by Gilbert White and his brother John in the year 1752, and explored the wild grounds on the top and the common towards Newton and the deep slopes facing north, but not a plant could I find. It is much to be regretted that this handsome shrub has disappeared. Its great rarity, its distinguished appearance, its early flowering, the sweet fragrance of its pale pink flowers render it one of the most attractive species in the British flora. But, as in the case of so many beautiful wild flowers, its attractiveness has proved its doom. Whenever a plant is discovered in its native haunts it is almost certain to be transferred to some neighbouring garden. One hundred years ago it seems to have been not uncommon in the woods about Andover and in other parts of Hampshire; now the plant is seldom met with. It is no doubt difficult to find, except when in flower in the months of February

or March, and the rabbits play havoc with the young plants; but man has probably been its greatest enemy. The process known as "copsing," that is, the cutting of the undergrowth in woods, is carried out in winter and early spring, when the plant is most conspicuous; the woodman who is fortunate enough to come across the "Mezell" takes it up and carries it home for his own garden or for sale. Thus Daphne Mezereum has become extinct not only in Selborne Hanger, but in most parts of Hampshire, though it still remains common enough in cottage gardens. But though the Mezereum is gone, it is well to know that Helleborus fætidus, the "stinking hellebore," bear's foot, or setter-wort, is still blooming on Selborne Hanger, not, indeed, in such abundance as in White's time, when it grew "all over the High Wood and Coney Croft Hanger," but still in considerable plenty. I counted, to my delight-for I have never found the species elsewhere—some fifteen to twenty plants, many of them in flower. It is, indeed, a striking and handsome plant, and, moreover, one of peculiar interest because of its importance in mediæval herbalism. In shrubberies one sometimes meets with it, where,

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blossoming as it does in January and February, it is, as White says, "very ornamental"; but in a wild state it is an extremely scarce plant. In early times it was eagerly sought after by herbalists and horse-doctors. "The good women," White tells us, "give the leaves powdered to children troubled with internal complaints, but," he adds, "it is a violent remedy and ought to be administered with caution." Old Gerarde has much to say with regard to "his virtues in curing oxen and such like cattell." Farriers or horse-leeches were wont, we learn, to cut a slit or hole in the dewlap, "as they terme it (which is an emptie skinne under the throat of a beast), wherein they put a piece of the root of setter-wort, suffering it there to remaine for certaine daies together," and, " this manner of curing they do call Settering of their cattell." Most of the herbalists tell the same story, and old Culpeper adds that "out of question it is a speciall thing to rowell cattel withall." It is interesting to know that this fine plant maintains its position in Selborne Hanger, for it is, with one exception, the most interesting species to be found in that classic locality.

Leaving the Hanger at the end nearest to

"Gracious Street," and crossing a hop-garden and some ploughed fields, "the deep, stony lane" is soon reached, where, in Gilbert White's time, " on the left hand just before turning to Norton Farm," the green hellebore grew. This uncommon plant, unlike its near relation the setter-wort, dies down to the ground early in autumn and springs up again about February, flowering almost as soon as it appears above ground. The flowers, as old Gerarde says, are of "a greenish herby colour," and the leaves are much "jagged or toothed about the edges like a saw." The plant is a stately one and distinctly rare, but when once established will maintain its position for many years. It was, therefore, with no feelings of surprise that, on the very spot mentioned by Gilbert White in 1778, I saw the species, in comparative plenty, just coming into flower. All over the bank of the deep, stony lane it grew, and made a fine show with its large, pale green flowers. Closely allied to the hellebore is the winter aconite of our gardens, sometimes found in a semiwild state, and it is interesting to notice that this pretty little plant, with its yellow flowers and glossy leaves, has established itself in some abundance along the side of a lane

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leading to the neighbouring church of Farringdon, which Gilbert White served as a curate for many years. Down the secluded valley of the Lyth, which runs from below the church to the Priory Farm, the site of the old monastery dissolved by Bishop Wainfleet in the year 1486, will be noticed on every side "sweet omens of returning spring." The glossy leaves of the wild arum are shooting up from among the dead leaves; dark patches of the dog's mercury, already in flower, will be seen under the beech trees, and in sheltered spots a few primroses may be found. On the steep slope of a wood, close to "Conduit" field, which marks the ancient source of the monastic water supply, a large number of wild snowdrops have established themselves. Very beautiful they looked in the February sunlight, and the sight of them added not a little to the charm of my visit to Selborne in the early spring.

# CHAPTER XI

#### THE HAUNT OF THE STONE CURLEW

AMONG the birds in which Gilbert White took a special interest the stone curlew or Norfolk plover must be given a foremost place. His description of this "handsome tall bird," as Sir Thomas Browne, the famous naturalist and antiquary, calls it, "remarkably eyed, and with a bill not above two inches long," still remains a classical passage on the species. He speaks of the stone curlew, in a letter written in 1768, as occupying "the high elevated fields and sheep walks" about Selborne. "Some of them," he adds, "pass over my house almost every evening after it is dark, from the uplands of the Hill and North Field, away down towards Dorton, where, among the streams and meadows, they find a greater plenty of food." repeatedly refers to their "short quick note," and in one of his poems on a summer evening's walk he "hears the clamorous curlew call his mate."

A hundred and forty years have passed by since White wrote of the stone curlew "in

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manners analogous to the bustard" as "abounding in all the campaign parts of Hampshire and Sussex," and those years have seen great changes in the conditions of country life. Many of the vast stretches of barren wold and downland have been put under the plough or otherwise invaded by modern improvements. Steam engines and mowing-machines break the silence of the country-side, and railways run through the ancient solitudes. And these changes have considerably affected the distribution of birds. Many of the haunts of the stone curlew have been rudely disturbed, and its numbers in consequence diminished. In one of his charming papers Mr. Hudson laments the disappearance of the bird from the Sussex downs, where in White's time it "abounded." Professor Bell, who for thirty years occupied the naturalist's old home at Selborne, tells us that during that long period he had never once seen a stone curlew alive or dead. Yorkshire, too, the species is reported to be far scarcer than in former years.

In spite, however, of Professor Bell's statement, the stone curlew continues to maintain its position in Gilbert White's old country, and in undiminished numbers. Most of the

lonely uplands and unfrequented sheep-walks of Hampshire are tenanted by two or three pairs of this exceedingly shy and retiring bird, whose weird and plaintive cry is so entirely in keeping with its surroundings. In the hilly district of the north, called by Mr. Dewar the Hampshire Highlands, in the neighbourhood of Selborne, on the chalk downs around Winchester, along the ridge of high barren land which stretches from Butser to Old Winchester Hill, indeed on most of the exposed uplands where "solitude and silence reign," the stone curlew, from March to Michaelmas, may be found.

One lonely haunt of this strangely fascinating bird I am intimately acquainted with. Far away from any village or hamlet, in the heart of the chalk country, where the ground rises to some six hundred feet above the sea level, a deep dip or depression in the downs falls away to the south-west. Not a cottage or homestead is visible from the sequestered spot, where the silence is broken only by the distant sound of the sheep-bell or the mournful wail of the peewit. The name of the nearest farm, which nestles beside a wood some little distance away, bears witness to the loneliness of the situation. It is known

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by the picturesque name of Lone Barn, and another farm a mile to the north is called in an ancient document Lonemore. To the breezy upland which stretches between Lone Barn and Lonemore several pairs of the stone curlew return every spring. The troughlike depression cut out of the down is their favourite haunt and nesting-place. The sides of the hollow are seamed with rabbit burrows. and innumerable grey flints are scattered over the turf. Dwarf elder bushes, and stunted thorns thickly clothed with shaggy lichens, are dotted over the down, on the ridge of which stand several noble yew trees. The short turf is starred with wild flowers, and in June, when the young birds are running about among the grey stones, the yellow lotus or bird's-foot trefoil and the purple thyme make a brave show. In places, where the soil has been thrown up by the rabbits, a few foxgloves are conspicuous, and several species of our wild orchids may be found.

Very difficult of approach is the stone curlew. Its large yellow goggle eyes seem to see in every direction, and on the slightest indication of danger, the scream of a blackbird, the cry of a peewit, the sudden scuttle of a rabbit, the birds steal silently away, or

crouch down motionless on the ground among the grey flints, where it is very difficult to discern them. Still, by dint of much careful stalking, taking advantage of the contour of the ground, the way of the wind, and the shelter of every thorn bush, it is possible, especially in nesting-time, to make the acquaintance of these strange birds in their native haunts. Several times during the past spring and summer (1908) have I watched at close quarters through a field-glass the stone curlews in the hollow near Lonemore Farm. Their first attempt at breeding was spoilt by the great snowstorm of April 25, when the snow lay nearly two feet thick on the exposed upland. A second clutch of eggs was laid on the bare ground, and this time all went well. During the period of incubation, and for some little time after the eggs were hatched, the birds were mostly to be seen near the same spot. The way of approaching them was soon learnt, and from the shelter of a spreading thorn I could note their ways unperceived, until at length revealing myself the birds would swiftly scuttle away with necks extended over the ground, taking flight only at some distance, when, uttering their wild harsh cry, what Tennyson

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calls "the great plover's human whistle," they would disappear in the deepening twilight.

After sunset the stone curlew leaves his upland haunts, and visits the low-lying meadow in search of food and water. Often in still summer nights his weird note may be heard in the water meadows, or as he flies overhead in the darkness. As autumn approaches the birds congregate into flocks, old and young together, and latter being easily distinguished by their swollen leg-joints, "like those of a gouty man," as White said, which have earned for the species the name of Œdicnemus or Thick-knee. These flocks are sometimes put up by sportsmen when out partridge-shooting in September. Gilbert White tells us that after harvest he had shot them before the pointers in turnip fields. A few years ago I received a specimen from Selborne which had been obtained in similar circumstances. Mr. Dewar mentions having seen a flock of over forty birds in the Hampshire Highlands on Septenber 25, 1897. Still, so shy and wary are the birds that, considering their numbers and wide distribution, they are comparatively seldom seen. The famous Hampshire sportsman, Colonel Peter Hawker, only shot five in

fifty years. One of these he mentions in his Diary, under July 7, 1813: "Killed a stone curlew (on my return from waiting for the deer) late at night, by calling it close to me with imitating its whistle."

#### CHAPTER XII

#### CHURCHYARD TREES

From very early ages trees have been associated with the burying-places of the dead. As far back as the times of the Hebrew patriarchs, the cave of the field of Machpelah, which Abraham bought for a sepulchre of the children of Heth, was encompassed, we read, "by trees in all the border thereof round about." Deborah, Rebekah's nurse, was buried in the valley below Bethel "under an oak," to which was given the touching name of Allon-bacuth, the oak of weeping.

There are peaceful associations connected with our country churchyards which appeal to most people. "Sweeter" it seems, as St. Swithun fancied,

To rest beneath the clover sod,
That takes the sunshine and the rain,
than in the stateliest of Gothic shrines.
"I would rather," said Edmund Burke,
"sleep in the southern corner of a little
country churchyard than in the tomb of the
Capulets." And this quiet sense of restfulness
and peace is engendered in no small degree

by the sombre shade and guardianship of our churchyard trees. The pathetic answer of the little maid in Wordsworth's poem betrays all unconsciously this feeling—

Two of us in the churchyard lie Beneath the churchyard tree.

Or in the more famous lines of Gray's Elegy, Written in a Country Churchyard—

Beneath these rugged elms, that yew-tree's shade, Where heaves the turf in many a mould'ring heap, Each in his narrow cell for ever laid,

The rude forefathers of the hamlet sleep.

It may be partly in consequence of these well-known lines that the elm and the vew tree are in thought most frequently associated with churchyards, and in certain parts of England they are undoubtedly the commonest churchyard trees. In the north, however, their place seems to be taken by the ash, the lime, and the horse-chestnut. Other species, too, may frequently be noticed beside ancient churches in the southern countries. The splendid avenue of limes which leads to the west door of Winchester Cathedral will be remembered by all visitors to that fascinating city. In the lonely churchyard of Boldre in the New Forest, on the north side of the church in which the poet Southey married his second wife Caroline Bowles, stands a magnificent maple. Beneath its shadow fitly

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lies William Gilpin, the author of Forest Scenery, for twenty years vicar of the parish amidst the scenes he so much loved and has so graphically described. Many are the allusions in Kingsley's writings to the great Scotch firs which border Eversley churchyard, close to which, in the spot of his own choosing, lies the poet and novelist. Beside some "aged thorns" in Old Bonchurch graveyard will be found the resting-place of John Sterling, the friend of Maurice and Carlyle, and of William Adams, the author of The Shadow of the Cross. Still, elms are perhaps the trees most frequently found in churchyards. That of Old Bonchurch, just alluded to, probably the most picturesque in the south of England, is surrounded by lofty elms of great antiquity. In Essex especially, the land of elm trees, many an interesting church is guarded by ancient elms, in the hollows of which the jackdaws build their nests, and from which the moping owl issues at eventide for its silent flight over the glebe. The stately church of Finchingfield, associated with memories of Stephen Marshall, the famous Puritan preacher in the days of the Commonwealth, is sheltered by some magnificent elms, which may have witnessed the changes of that stirring time. In the same

neighbourhood, the peaceful churchyard of Black Notley is separated from the adjoining cornfields by a long line of ancient elms, which stand sentry over the pyramidal tomb erected to the memory of our illustrious naturalist, John Ray.

"In the south of England," wrote Gilbert White, "every churchyard almost has its yew tree, and some two." This is specially true of Hampshire, as was noticed by the early botanist Thomas Johnson, in his enlarged edition of Gerarde's Herbal. "In Hampshire." he states, "there is good plenty of yews growing wilde on the chalkie hills, and in Church-yardes where they have been planted." It is, however, not a little remarkable, as the author of the Flora Vectensis pointed out, that whilst we find a yew planted and religiously preserved in front of nearly every ancient parish church in the county, yet "I cannot call to mind," he adds, "the existence of this tree in any one of the churchyards belonging to the thirty parishes into which the Isle of Wight is divided." This is doubtless to be explained by the curious fact that while the yew tree is common, and undoubtedly indigenous, on the downs of Hampshire, it is almost entirely unknown in the Isle of

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Wight. Some of the Hampshire yews are of vast size and of most hoary antiquity. We may speak, without any exaggeration, in the words of the In Memoriam, of their "thousand years of gloom." Gilbert White thought that the Selborne tree, which he found to be upwards of twenty-three feet in the girth, was at least coeval with the church. When Cobbett, on one of his "Rural Rides," visited the beautifully situated churchyard, he was naturally struck with this venerable tree. "According to my measurement," he notes, "the trunk is twenty-three feet eight inches in circumference. The trunk is short, as is generally the case with yew trees; but the head spreads to a very great extent, and the whole tree, though centuries old, appears to be in perfect health." This was written in 1823, and since then the trunk has increased to twenty-five feet two inches in circumference. This is one of the largest churchyard yews in Hampshire, but many others fall not far short of it. There are enormous trees in the churchyards of Durley and of Farringdon, parishes served at one time by Gilbert White as curate. Besides the little Saxon church of Corhampton, in the Meon Valley, now shading the Saxon sundial, a magnificent yew,

with a girth of over twenty-two feet, may be seen. William Gilpin, in his Forest Scenery, thus speaks of a giant yew in Dibden churchyard: "Another tree worth pointing out in the New Forest is an immense yew, which stands in the churchyard at Dibden. It is now, and probably has been during the course of the last century, in the decline of life. its hollow trunk still supports three vast stems; and measures below them about thirty feet in circumference—a girth which perhaps no other yew tree in England can exhibit. Though its age cannot be ascertained, we may easily suppose it has been a living witness of the funerals of at least a dozen generations of the inhabitants of the parish." The same might also be said of the venerable yew trees in the churchyards of Boarhunt, Brockenhurst, South Hayling, St. Mary Bourne, and of others in the county of Hants.

The object of planting yews in churchyards has been much disputed. Some antiquaries have asserted that the custom arose in order to supply bows for the purpose of archery, but this idea is in the highest degree unlikely. Gilbert White suggested that one object might have been to serve as "a screen to churches by their thick foliage from the

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violence of winds." They might also, he thought, have been placed as a shelter to the congregation assembling before the church doors were opened, or as an emblem of mortality by their funereal appearance. Perhaps rather, as the learned Ray suggested, the yew was planted in churchyards because, from its evergreen foliage and the great age to which it attained, it was regarded as a symbol of immortality.

Now and again a record may be found in old church accounts, or in some other parish document, of the planting of trees in the churchyards. When Thomas Ken, the author of our Morning and Evening Hymns, afterwards Bishop of Bath and Wells, was Rector of East Woodhay, near Newbury, he planted, we learn, a yew tree in the churchyard. The tree stands on the north side of the church. and though planted over two hundred years ago its trunk only now measures in circumference some seven feet seven inches. Portchester, on the north side of the Norman church which is situated within the castle walls, there stands a yew with an interesting history. It appears that the tree which formerly stood there was killed by the smoke from the kitchens of the French prisoners,

some eight thousand of whom were confined in the castle during the war with Napoleon at the beginning of the last century. The churchwarden's book records the fact that on the departure of the French prisoners a new tree was planted in the place of the one that had been destroyed. The trunk of this yew tree, at the height of four feet from the ground, now measures seven feet two inches in circumference.

#### CHAPTER XIII

#### CHURCHYARD FLOWERS

It is curious how some native plants seem to have a partiality for churchyards. Just as owls and swifts and jackdaws love to haunt church towers, so do certain British wild flowers delight in the shady seclusion of the spot where the rude forefathers of the hamlet sleep.

In former days it appears to have been the custom to introduce certain species into churchyards. As the floors of churches were strewn with rushes from the marsh, so were the graveyards planted with flowers of the field. As a most interesting illustration of this custom it will be remembered that Samuel Pepys, in his famous Diary, tells us that on April 26, 1662, when travelling from Gosport to Southampton, "in company with Sir George Carteret and his clerk, and Mr. Holt our guide, we observed, on our way, besides my Lord Southampton's parks and lands, which in one viewe we could see £6,000 per annum, a little churchyard where the graves are accustomed to be all sowed with sage."

The mention of "my Lord Southampton's parks and lands" enables us to identify the churchyard. The lands surround the once magnificent Premonstratensian Abbey of Titchfield, granted by Henry VIII to Lord Chancellor Wriothesley, and by him converted into what Leland described in 1540 as "a righte statelie house embatayled and having a goodlie gate." The "goodlie gate," which was part of the dismantled monastery, may still be seen and remains in a fair state of preservation, but the "righte statelie house" has fallen into utter decay. Many interesting associations surround the picturesque ruin. In the days of the white-robed canons more than one of the Plantagenet kings visited the Abbey, in the chapel of which Margaret of Anjou was married. In the summer of 1752 the poor boy Edward VI tried to recruit his health in the peaceful valley. Shakespeare almost certainly visited the "statelie house," and sat in the garden "circummured with brick" with the third Earl, to whom he dedicated Venus and Adonis. As a child. Rachel Wriothesley, afterwards the devoted wife of Lord William Russell, played in the "curious-knotted garden." Above all, it was at Titchfield House that Charles I

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surrendered himself to Colonel Hammond, and from the mouth of the haven some two miles instant "took boate to the Isle of Wight," where he became virtually a prisoner in Carisbrooke Castle.

Fifteen years later—the grim days of the Commonwealth having intervened—Pepys, on his way to Southampton, viewed my Lord Southampton's parks and lands as he passed "the little churchyard where the graves are accustomed to be all sowed with sage." The little churchyard is clearly the disused one surrounding the old church of Crofton, situated on rising ground above the Meon Valley in which the ruins of the ancient palace are situated. One summer I visited the sacred spot to see if any trace of the ancient custom remained, but not a single plant of sage could I discover. Nettles there were in abundance, both the small and the common kinds, and mallow, and the yellow St. John's wort, and purple knapweed; but no specimen of Salvia verbenaca remained. Still the plant is often found in churchyards, and in churchyards in the neighbourhood of Crofton. is abundant at Portchester, around the Norman church, inside the castle walls. In several of the Isle of Wight churchyards it

may be seen, as at Brading, associated with Leigh Richmond's *Annals of the Poor*, and in the disused churchyard of old St. Helen's. In Withering's *British Plants*, published early in the last century, and still interesting for the number of localities of rare plants there recorded, we find the names of several churchyards where the wild sage or English clary was then to be found.

Another plant associated with churchyards in the olden times was the well-known purple mallow. It was commonly used, says Baxter, to "decorate the graves of our ancestors." And certain it is that the plant is still frequently found in churchyards; as is also an uncommon species of dock popularly known as the "fiddle-dock," but which rejoices in the Latin name of Rumex pulcher. Why the species should have been distinguished by the epithet "beautiful" it is hard to say, unless it was by way of comparison, for it is certainly more pleasing in appearance, with its rigid, spreading branches, than many of its congeners so abundant in waste places. Many years ago the author of the Flora Vectensis noticed its strange partiality for churchyards, stating that it was to be found at Carisbrooke, Freshwater, Brixton, Binsted.

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and indeed in most of the churchyards of the Isle of Wight, as well as in many on the mainland of Hampshire, as in those of Havant and Hambledon and Petersfield. He added that he also observed the fiddle-dock growing abundantly at Charleston, South Carolina, but "chiefly in the areas of the city churches." The same author notes that "All-Good." or "Good King Henry" as the species is usually called, is to be found in like situations. This plant was formerly in great request as a potherb, and is still cultivated in Leicestershire under the name of "mercury," while in other districts it is known as "wild spinach." grows plentifully about the site of the old priory chapel at Selborne; and I remember seeing it in a still more interesting situation -beside the pyramidal tombstone of the celebrated botanist, John Ray, in the lonely churchyard of Black Notley in Essex.

Sometimes, indeed, choicer plants may be found in churchyards where they have been known to exist for a long number of years. A rare little rock species, the "Hutchinsia," whose home is in the limestone districts of the west of England and Wales, still exists on a churchyard wall in Kent, where it is said to have been planted by the learned

botanist Dillenius nearly two hundred years ago. Towards the end of the seventeenth century, one Adam Buddle, a most diligent "searcher after simples," many of whose specimens are still preserved in the botanical department of the British Museum, noticed in the old churchyard of Dunwich, on the Suffolk coast, a patch of the East Anglian sickle medick, Medicago falcata. Since then the sea has sadly encroached on the graveyard, but on the very edge of the cliff, from the face of which bare, white, piteous bones protrude, the plant still maintains an existence, as when Adam Buddle, and after him George Crabbe, poet and botanist, visited the spot. In the same desolate churchyard, beside the ruined tower which "naked in the sea-wind stands and moans," other uncommon plants flourish. One corner of the sacred enclosure is occupied by a lusty colony of the handsome Scotch or cotton thistle; the aromatic fennel is plentiful; while an ancient pot-herb, much prized in mediæval days-perhaps originally an escape from the monastic garden of the ruined Franciscan priory hard by, is to be seen in extraordinary abundance. A few miles distant from Dunwich, in another lonesome graveyard, nestling beneath the

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dismantled walls of a once splendid edifice, a rare species of wild lettuce has been known to exist for a long while. In the neighbouring county of Essex, beside the fine Norman church of St. Botolph at Colchester, a choice calamint has taken refuge from the struggle of existence, in company with a few plants of the handsome pale pink soapwort.

In the picturesque churchyard of Kingston in the Isle of Wight, where the ancient church, one of the smallest in the diocese of Winchester, stands on a grassy knoll, there may be seen every Lent, as the spring advances, a host of golden daffodils dancing and fluttering in the breeze. Another Island churchyard can boast of the possession of a very rare Sedum or stonecrop, which has probably flourished there from mediæval times. In early spring the graveyard surrounding the church of which Izaak Walton's son-in-law was once rector, and through which the aged angler must have often passed as he wended his way to the Meon stream, now as then "full of stores of trout," is ablaze with the little vellow celandine dear to the heart of Wordsworth; while in another churchyard, not far distant, the beautiful bee-orchis comes up plentifully every year.

### CHAPTER XIV

#### A PAGAN BURIAL-GROUND

In the room of Anglo-Saxon antiquities at the British Museum are two cases labelled "Anglo-Saxon Remains from Droxford."

The Venerable Bede, in his Ecclesiastical History, tells us that of the German races who conquered Britain, the Angles, the Saxons, and the Jutes, the last settled in Kent, in the Isle of Wight, and in certain parts of Hampshire. It would seem that they occupied the district bordering on the Solent and Southampton Water and the land of the Meonwaras. "The stages of the Jutish progress," says the modern historian, "are marked by a succession of townships along the Meon Valley from mouth to source. Meon, Titchfield, Wickham, Soberton, Droxford, Meon Stoke, Corhampton, Warnford, and Meon East and West were all existing in the eleventh century, and in all likelihood had then been founded nearly 600 years."

Archæological researches have abundantly confirmed Bede's statement as to the Jutish

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occupation of Kent and the Isle of Wight. Characteristic Jutish ornaments, such are as found in the Danish mosses, have been discovered in the pagan graves of Kent and of the Island Downs. But on the Hampshire mainland no such evidence had been forthcoming. "Up to the present time," wrote Mr. Reginald Smith in the Victoria History of Hampshire, published in 1900, "no discoveries have revealed any trace of Jutish occupation on the mainland of Hants." "It is possible," he adds, "though hardly to be expected, that finds will one day be made in the Meon district."

The words can hardly have been in type before the interesting discovery was made. The Meon Valley Railway was in process of construction. For some miles the line follows the low ground which skirts the course of the river, but at Droxford it cuts through the top of the hill which overlooks the valley. It was during the making of this cutting, immediately above the ancient church of Droxford, that the Jutish occupation of the district revealed itself. No mound was visible, and the rough pasture land gave not the slightest indication of what lay only a few feet beneath the coarse herbage. At first a few human

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bones attracted the attention of the navvies. Then some spearheads were found, and battered fragments of corroded iron. news reached the ears of a distinguished archæologist, who was quickly on the spot. It was clear that an ancient burial-ground had been struck, and one of considerable size. The graves were only about two feet below the surface; but owing to the nature of the soil it was difficult to remove the bones without breaking them, and the employment of a steam-navvy did not improve matters. some cases entire skeletons were laid bare, the bones being surrounded by large flints. One skeleton, as it rested on its bed of chalk, measured eight feet in length, and beside it lay a mighty sword. A large number of skulls and lower jaws were found, the teeth of which were in a state of perfect preservation. Many of them were, it is true, ground down, perhaps one-third of their original size, by actual use, but no sign of decay was visible. With regard to the position of burial no rule had been observed. Some bodies had been interred east and west; other skeletons lay north and south. The burials were numerous and close together. Frequently some articles had been placed

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beside the body; other times the corpse had been simply covered with flint-stones. Among the articles found were several swords, but spearheads and shield-bosses were more numerous. Knives, too, were frequently met with, and sometimes a knife and spear together. Beside one of the swords lay a large nodule of pyrites; and a piece of whetstone had been placed by one of the spears. It was evidently thought that the weapon would require sharpening. Some horse-shoes were also found. The burial-place, however, was not one for warriors only. A large number of female ornaments were discovered. Among these were fibulæ of various designs and richly gilded, spindle-whorls of Kimmeridge shale, several pretty tweezers, and a large number of beads. Vessels were represented by "a small rudely-made cup of black earthenware, fragments of two other pots of black ware, and part of a brown glass tumbler, as well as the remains of two small wooden vessels made tub-fashion, and hooped with bands of bronze." In addition to these objects a number of Roman coins were discovered. chiefly of the time of Marcus Aurelius, Crispus, Maximinus, and Constantine II.

Of these discoveries, by far the most

interesting, indeed the one that gave distinction to the Droxford cemetery, consists in certain fibulæ of a special fashion and design. These fibulæ or brooches are circular concave ornaments, and peculiar to the Jutish race. They have been found in tribal burying-places in Kent, in the Isle of Wight, and in Jutland. To these must now be added the recently discovered burial-ground in the Meon Valley. Thus, in the year 1901, the making of a railway has been the means of proving the statement, often doubted, of the venerable historian of Jarrow, made twelve centuries ago, with regard to the occupation of South Hampshire by the Jutish tribe.

The cemetery was clearly pagan, used by the worshippers of Thor and Wodin. The Jutes were the last of the Anglo-Saxon settlers to accept Christianity. Long after the other tribes had forsaken their ancient deities, the Jutes of the Isle of Wight and of the Meon Valley clung to the gods of their forefathers. It was not till the close of the seventh century that, in consequence of the labours of Bishop Wilfrid, the faith of Christ found a lodgment in the valley. Then in the course of time Christian churches began to supplant the heathen temples; and the

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cemetery on the top of the hill, associated with pagan rites, fell into disuse. The settlers carried their dead to the sacred enclosure beside the little wooden church which they had erected in the valley hard by the Meon stream. As generation followed generation, and the worship of Christ finally displaced the worship of Wodin, the burial-place, where the ancient warriors lay beside their weapons and their hunting-knives, and where the ladies of the settlement had been buried with their tribal ornaments, came to be forgotten, and for long centuries its very existence was totally unknown. Little thought the aged Izaak Walton, when he stayed with his daughter at Droxford Rectory, and wandered over the rector's glebe, that he was treading on ground sacred to the memory of our Jutish forefathers! How the knowledge, too, would have delighted the soul of Gilbert White, who frequently visited the parish in which the cemetery is situated.

Only a small portion of the pagan burialground has been broken up. Its area apparently was confined to the top of the hill, and the railway cut through some hundred yards of it. On each side of the cutting the ground remains undisturbed. The surface consists

of rough pasture land, and before the cutting was made a lane ran across it towards the stream below. A portion of this lane, so overgrown with brambles and coarse herbage as to be almost impassable, still remains, and comes to an abrupt end at the edge of the deep cutting. It is now a favourite haunt of many small birds, who build their nests in the tangled brushwood close to the passing trains. In spite of the proximity of the railway, the spot remains a very quiet one, and the wild creatures have not been driven away. In the autumn flocks of goldfinches feed on their favourite thistle-seed, which ripens abundantly in the rank pasture. A long belt of beech trees and undergrowth runs below the burial-ground on its western side, and separates it from the meadows and cornland which slope down to the marshes beside the river. In this thicket vast flocks of wood-pigeons will congregate at certain seasons, and most winters a few bramble-finches will come to feed upon the beech-mast. On a still evening in spring and summer-time the whistle of the stone curlew will be heard in the marshes below, where the snipe and wildduck continue to breed, as they doubtless did in those far-off days when the Jutes

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first occupied the valley. From every side, too, will be heard the mournful wail of the peewits, who lay their eggs every season on the rough fallow which lies below the ancient burying-place.

### CHAPTER XV

#### THE SPLENDOUR OF THE MEADOWS

THERE is a familiar passage in the Psalms which speaks of the ungodly as consuming away like "the fat of lambs." It is a curious rendering derived from the Targum Aramaic paraphrase of the Psalter. The consuming of the fat on the altar of sacrifice would in any case be a strange simile for the evanescence of the wicked. And the poet had no such metaphor in his mind. What he said was that the bad man, in spite of his pomp and prosperity, would pass away like "the splendour of the meadows." The comparison, especially in a country like Palestine, is vivid and impressive. "Let a traveller," wrote Dr. Tristram in his Natural History of the Bible, "ride over the downs of Bethlehem in February, one spangled carpet of brilliant flowers, and again in May when all traces of verdure are gone; or let him push his horse through the deep solid growth of clovers and grasses in the valley of the Jordan in the early spring, and then return and gallop across a brown, hard-baked gaping plain

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in June, and the Psalmist's imagery will come home to him with tenfold power." The brilliant flowers of Palestine, as Dean Stanley once said, are one of the great features of its scenery. The pastures in early spring are aglow with daisies, lilies, lupins, clovers, especially ablaze with scarlet flowers, such as anemones, tulips, and poppies. It was no exaggeration to speak of "the splendour of the meadows."

But the happy phrase is not for Palestine only. Many persons who have never visited the Holy Land have travelled as far as Switzerland, where the splendour of the meadows is proverbial. Never shall I forget the wealth of wild flowers when for the first time I stood in an Alpine pasture beyond the village of Andermatt. Here were scores of plants I had never seen, their names unknown to me. Like Wordsworth, beside the lake in Gowbarrow Park,

I gazed—and gazed—but little thought What wealth the show to me had brought.

And the rapidity with which the flowers disappear is a striking characteristic of the flora. On the way up the Furka Pass an expanse of pale yellow in the distance attracted attention. It proved to be a fine stretch of

that exquisite Alpine anemone, A. sulphurea. Returning ten days later, no trace of the colouring remained. The flowers had faded and the splendour of the pasture had passed away.

There is a splendour of the meadows, too, in our own country. In early spring when

Daisies pied and violets blue, And lady-smocks all silver-white, And cuckoo-buds of yellow hue, Do paint the meadows with delight,

few will be found to dispute the poet's words. Or when, in the stately verse of Milton,

The light morning-star, day's harbinger, Comes dancing from the east, and leads with her The flowery May, who from her green lap throws The yellow cowslip, and the pale primrose,

who shall deny the gladness of the occasion? Or, once again, when, in more sober fashion, we sit with Izaak Walton "under a willow tree by the water-side," and "looking down the meadows, watch here a boy gathering lilies and lady-smocks and there a girl cropping culverkeys and cowslips," we shall be prepared to admit the sweetness and charm of the quiet scene.

What plant "the best of fishermen and men" meant by "culverkeys" is a matter

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of uncertainty, but the lady-smocks is the species still known by that name, which flowers for the most part, as an old writer says, "when the Cuckow begins to sing her pleasant notes, without stammering." At this season of the year, before the hay is cut, the beauty of our meadows is at its height. "Consider," said Ruskin, "what we owe merely to the meadow grass, to the covering of the dark ground by that glorious enamel, by the companies of those soft, and countless, and peaceful spears." And then follows one of the most eloquent passages in the writings of that master of English prose on "the infinite of that meadow sweetness. Shakespeare's peculiar joy." Above the green enamel the buttercups, the bulbous ranunculus, and the meadow crowfoot, put forth their golden petals, mingled here and there with the tall red spikes of rumex or sorrel. In some pastures the great white ox-eye daisy, called "bozzum" in the Isle of Wight, is extraordinarily abundant, and however injurious to the farmer, presents a fine spectacle to the passer-by.

Down in the damp meadow, known as Longmead, which runs between two arms of a chalk-stream, haunted with memories of

the "honest Fisherman," the wild flowers continue to bloom, unmolested by the scythe, throughout the season. In March, or early in April, the dull pink flowers, "tending to purple," as the herbals say, of the petasites, or butterbur, appear, followed some weeks later by the great leaves, "like unto a round cap or hat, called in Latine Petasus, of such a widenesse as that of itselffe it is big and large enough to keepe a man's head from raine, and from the heate of the sunne." As the leaves of the butterbur expand, the marsh-marigolds or kingcups are coming into bloom, and for awhile the meadow is a sheet of gold with their large bright yellow flowers. As the kingcups fade their place is taken by several species of buttercup which grow tall and fine in the rich, luscious soil. With the yellow buttercups are mingled the red flowers of the ragged robin, the delicate lilac of the cuckoo-flower, and the exquisite drooping blossoms of the water-avens. In June, among other interesting species, the marsh-orchis will be seen, both the purple and the flesh-coloured varieties, and a few spikes of the bee-orchis; while as the summer advances the flowers of Spiræa or meadow-sweet, the queen of the meadows, fill the air with fragrance.

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Sometimes uncommon species are met with, which give an additional interest to the splendour of the meadows. In parts of the New Forest, especially near the Avon, the beautiful buckbean, with its delicately fringed petals, is so abundant that many of the pastures are known as "buckbean mead." The Iffley meadows at Oxford have long been famous as the home of the fritillary, or "ginny-hen floure," the petals of which are "chequered most strangely, surpassing the curiousest painting that Art can set downe." This striking plant, it will be remembered, is alluded to by Matthew Arnold in his elegy on Arthur Hugh Clough, when he calls to mind their rambles together near Oxford-

I know what white, what purple fritillaries The grassy harvest of the river-fields About by Ensham, down by Sandford, yields.

Among the species of British plants which bear the specific name of *pratensis*, "as frequenting meadows," is a geranium or crane's-bill. It is the largest and most handsome of the British species, and bears fine purple flowers. In Hampshire it is a rare plant, but it may be seen in a damp meadow in Gilbert White's old parish of Selborne, not far from the Priory Farm, where it occurs in some

plenty. Lower down the valley, the bistort, so abundant in Swiss pastures, so rare in Hampshire, has established itself. In the same neighbourhood the white meadow saxifrage is plentiful in one single pasture, while in the rest of the country it is a scarce species. The oxlip, not the hybrid between the primrose and cowslip, but the true oxlip, what Darwin called the Bardfield oxlip, still grows in the wet meadows near the bridge which crosses the river Pant, at Great Bardfield in Essex, where the plant was first discovered in 1842. Now and again, but very rarely, in what old Gerarde calls "fat and fruitful meadows," there may be seen the tall and stately elecampane. The plant was formerly in great repute as a tonic, and wonderful virtues were ascribed to it. The candied rootstock is still occasionally used, and is "marvellous good for many things." Once only have I found this splendid plant. It was growing in fair abundance in the corner of a meadow in Dorsetshire, far away from any habitation and apparently wild. Just over the hedge, in the adjoining pasture, another choice species was in bloom. For the space of some twenty or thirty square yards the ground was purple with the beautiful flowers

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of the colchicum or meadow saffron. The sight was one not easily forgotten. It was still possible, even in September, to speak of the splendour of the English meadows.

# CHAPTER XVI

#### SOME AUTUMN FLOWERS

"OF all the propensities of plants," wrote Gilbert White in 1778, "none seem more strange than their different periods of blossoming." Some, like the hellebore or setterwort on Selborne Hill, produce their flowers in the winter, or very first dawnings of spring; many when the spring is established; some at midsummer; and some, like the ivy and the meadow-saffron, not till autumn. The fact becomes stranger when we find members of the same family of plants differing widely in their time of flowering. There are, for instance, two species of crocus in the British flora: the one flowers in March, the other in October. "This circumstance," said White, "is one of the wonders of creation, little noticed, because a common occurrence, yet ought not to be overlooked on account of its being familiar, since it would be as difficult to be explained as the most stupendous phenomenon in Nature."

Say, what impels, amidst surrounding snow Congealed, the crocus' flamy bud to glow?

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Say, what retards, amidst the summer's blaze, Th' autumnal bulb, till pale, declining days? The God of Seasons, whose pervading power Controls the sun, or sheds the fleecy shower; He bids each flower His quickening word obey, Or to each lingering bloom enjoins delay.

The vernal crocus, with violet-purple flowers, the stigmas of which are of a deep orange colour, is well established in many parts of the country. George Crabbe found it many years ago in the osier ground at Beccles. It is abundant in some damp meadows near Nottingham. The autumnal crocus is a rarer species, the flowers of which, entirely destitute of leaves, are in perfection early in October and fade away towards the end of the month. The leaves appear shortly before Christmas. This plant, too, may be found in the low-lying meadow-land between Nottingham Castle and the river Trent. In general appearance the flowers of the autumnal crocus resemble those of the colchicum or meadow-saffron, another "leafless orphan of the year" which blossoms at the same time, but are readily distinguished by their six stamens instead of three. This places the colchicum in the order of the lilies instead of among the irises. So wonderful are the arrangements whereby this plant, which, as Dr. Turner observed in the sixteenth

century, "hath leaves and seedes in sommer, and flowres lyke unto saffron flowres aboute Michelmess," contrives to ripenits seeds that they are referred to by Paley in his Natural Theology as a striking example of natural compensation. The colchicum is one of the glories of our autumn calendar. Not generally distributed, it is often very abundant where it occurs. I have seen it in splendid profusion, a wide sheet of purple blossom, in "fat and fertile medowes" below the Malvern Hills, and also in many parts of Somersetshire.

Another genus, closely allied to the colchicum is the beautiful scilla or squill. In addition to the well-known blue-bell or wild hyacinth which carpets our woods in May, there are two species indigenous to Britain, well distinguished by their time of flowering, known as Scilla verna and Scilla autumnalis. These are both rare species, and of an exquisite and peculiar charm. The lovely little vernal squill, with its sky-blue, star-like flowers, "the starry jacinth" of old Gerarde, is one of the most graceful of British plants. No flower confers a greater charm on its haunts than this. It attracted the special attention of the illustrious John Ray, when

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in 1662 he made a botanical "Itinerary" along the coast of Wales. He noticed it at Llandwyn, in the Isle of Bardsey, at St. David's Head, and in Caldy Island over against Tenby. It may also be seen as Mr. Hudson tells us in his Land's End. starring the short, springy turf, in the most exposed situations along the rocky coast of Cornwall in May and early June. A rarer plant, and not so beautiful, is its cousin, the autumnal squill. The flowers are of a less pure blue, and the leaves do not appear until later. Only in Devon and Cornwall and in a few other counties is it to be found. In one locality, however, in the Isle of Wight it flourishes in extraordinary abundance. On the sandy spit of land which adjoins the ruined church of St. Helen's its pale violet-blue flowers may be seen in thousands every September. The spit is a famous haunt of wild flowers; no less than two hundred and fifty species, some of them choice and rare, may be found upon it; but never is the spot so attractive as when the autumnal squill is in flower.

The same habit with regard to the time of flowering is to be noticed in the family of gentians. One of the treasures of the British flora is the lovely little spring gentian, only

to be found on wet limestone rocks in Yorkshire, Durham, and Westmorland. A tuft of this exquisite little plant, nestling in its native subalpine rockery, with its comparatively large, bright blue, salver-shaped flowers, is a truly beautiful sight. In the month of April it begins to blossom, and continues in flower till the middle of June. Our commoner species, on the other hand, flower in the autumn. On the chalk downs of Surrey and Hampshire the autumnal gentian, an erect plant with a square, leafy stem, and purplishblue flowers which only open in the sunshine, may be seen in large quantities, and will go on flowering till November. Its near relative, the field gentian, at once distinguished by the parts of the flower being in fours instead of in fives, is also in blossom. This plant delights in moist, mountainous pastures, and though widely distributed is more common in the north of England and in Wales. Strange to say, a variety or sub-species of the autumnal gentian has acquired the habit of flowering in May. It is a tiny plant, seldom exceeding three inches in height, to be found on the exposed downs on the Isle of Wight. On the grassy slopes on the top of Culver Cliff it appears every spring in plenty, and also on

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Afton Down, and on the downs above Ventnor and the Undercliff.

One other tribe must be mentioned which exhibits the same peculiarity. "There be," as Gerarde reminds us, "divers sorts of prickely broome, called in our English tongue by sundry names, according to the speech of the countrey people where they doe grow: in some places Furzes; in others Whins, Gorsse, and of some prickly broome." The common kind begins to flower very early in the season, and a few golden blossoms may often be seen in warm situations in January. For many months our commons are ablaze with this gorgeous shrub, which "decks itself with ornaments of gold," Later on in the season when the "yellow whin" is in fruit and its "bursting seed-bells crackle in the sun," the dwarf furze comes into flower, and presents in company with the purple blossoms of the ling and heath a splendid expanse of colour.

Thus flowers succeed each other in constant and regular order. Each species has its own time and season. Be the weather what it may, the date of flowering will not be greatly affected. Year after year the same succession is observed. The various species of crocus and squill, of gentian and "prickely broome"

will appear, each one at its own appointed time, obeying a law which cannot be broken. We cannot explain the wonderful phenomenon. In answer to the question, why one species of gentian flowers in the spring and another species intimately allied flowers in the autumn, we can only say with Charles Kingsley in his *Winter Garden*, "I don't know; and you can't tell me." It is, as White said, one of the wonders of creation.

### CHAPTER XVII

#### ON THE COMMON

THERE is always a fine sense of space and freedom on the common. The wide heath is around you, and the wide sky above. And when, as sometimes happens after a thunderstorm, the arch of a rainbow spans the entire vault of heaven, a sense of grandeur and sublimity is added to that of freedom. The air itself, too, especially when coming off the sea, is a cordial of incredible virtue. So at least thought Emerson when, with reference to a similar situation, he says, "Crossing a bare common, in snow puddles, at twilight, under a clouded sky, without having in my thoughts any occurrence of special good fortune, I have enjoyed a perfect exhilaration." For many miles the common extends, always keeping near to the coast-line, a wide stretch of gorse and heather and fern, with here and there a straggling belt of Scotch firs or a clump of silver birches. The lofty tower of a ruined church, a conspicuous object alike from land and sea, rises some hundred feet from the edge of the common and stands sentinel

over the scene, looking down upon the varied life below as the seasons succeed each other—the peasant cutting furze or peat for his cottage fire, the rabbits scuttling among the brakes, the little green lizard basking in the summer's sun, the birds hawking for moths and flies and other insects, the rich colouring of the common when the whins and heather are in bloom.

As one walks along the narrow winding trackways in summer-time the vast wealth of insect life is astonishing. At every step countless winged creatures, moths, gnats. fern-chafers, yellow underwings, rise out of the ling and bracken and settle again almost immediately. The air, too, is full of myriads of tiny midges, which help to support the numerous birds that make the common their home. Wheatears, meadow-pipits, linnets abound, and the well-known note of the whinchat, "U-tick, u-tick," is heard on every side. All day long, from early dawn till far into the deepening twilight the common, like Tennyson's wood, is "a world of plunder and prey." With restless activity the swifts dash shrieking around the church tower, and the swallows skim silently over the gorse from sunrise to sunset. A kestrel-hawk is mostly to be

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seen hovering somewhere over the common. The tap of the green woodpecker will not infrequently be heard on the bark of the fir-trees. As twilight gathers the nightjars or goat-suckers appear, and owls, both the brown owl and the barn owl, issue from their hiding-places in search of food.

Sometimes, after a hot day in summer, when the last glow of the setting sun is fading in the west and the great bat, is taking its evening flight, a dense white mist creeps over the common. To just above the level of the ling and heather the vapour rises, giving the appearance of a wide lagoon, with the taller gorse-bushes standing out of the water. Indeed, so perfect is the optical illusion in the gathering darkness that it is difficult to believe one is not gazing on a vast inland sea. Nightjars abound on the common. On a summer's evening their curious jarring note, uttered only when the bird is at rest, will be heard in every direction. Sometimes as many as five or six will be seen on the wing at once. A mysterious charm attends their silent flittings in the fading light. They appear and disappear in a strange manner; now fluttering about like enormous moths; now rising into the air with rapid flight; and then with a

sudden twist, shooting down among the gorse and bracken. Night-hawks the peasants call them; and the name is appropriate enough as one watches the birds hawking for insects in the twilight of a summer's evening.

During the last week of July a short-eared owl might often be seen hovering like a kestrel over the common, in search of field-mice and other small game. Up and down a marshy swamp the handsome bird slowly sailed, then hawk-like would hover some moments in the air, till with a sharp half-turn-over it would drop down into the dense herbage. In a minute or so it would reappear, and the same process would be repeated. In former days, before the draining of the fens, the short-eared owl bred regularly in many parts of East Anglia; now it is usually met with as a winter visitor. It is clear, however, that this bird had a nest somewhere among the bracken last summer

In a belt of Scotch firs which separates the common from the tidal river, numbers of herons have at one spot made their home. As many as forty nests were tenanted last season. Fortunately, the clump of trees occupied by the heronry is on private land, and the

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proximity of a keeper's cottage is a further guarantee for protection. Most interesting was it to watch those splendid birds, the largest of our indigenous species, in their nesting-quarters. As one approached the secluded spot a number of old birds left the fir-trees, and with loud croakings sailed away over the tidal stream, and settled out of danger on the further bank. Others stood up in their nests; while the young ones kept up a constant cry, harsh, guttural, and grating, as if to frighten the intruder away. Soon, however, the parent birds returned to their charge, and alighting on their nests calmly surveyed the scene. It was an unusual "entertainment," one that the Naturalist of Selborne often desired but "never could manage to see," thus to be at close quarters with such a fine company of birds

In former years the common was a breedingplace of the stone curlew, and even now, during the spring and autumn migrations, its wild human whistle may occasionally be heard. The bittern, too, was not unknown, and Crabbe's lines, written with reference to the marshes near Slaughden Quay, might with equal truth have been applied to those which

stretch between our heronry and the tidal stream—

The loud bittern from its bulrush home Gave from the salt ditch-side its bellowing boom.

On this narrow stretch of marsh-land the lovely sea-lavender was coming into bloom, and within a few weeks a wide sheet of exquisite mauve blossoms would cover the muddy flats. Spikes of the sea-aster, or Michaelmas-daisy, were just beginning to show themselves, and a few plants of the fragrant sea-southernwood with its silvery foliage might be seen. But on the common, here as at Aldeburgh, "dwarfish flowers among the gorse are spread." In the spring the vernal whitlow-grass and the early myosotis, with its thousands of tiny sky-blue flowers, are abundant, and in some places on the heath the choicer Teesdalia.

Along a ditch on the verge of the common, in company with the great yellow mullein and the black nightshade, the deadly hemlock was this autumn growing in profusion. Its tall stems, spotted and splashed with purple, were very conspicuous in the tangle of coarse herbage. But more striking still were a number of plants of the uncanny henbane scattered along a dry, dusty bank. Seldom

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have I seen such lusty specimens of this rare and poisonous species; and never in such lavish abundance? Many of the plants were from four to five feet high, and their ragged appearance, their faded green foliage, soft and clammy to the touch, and strong, sickly smell—"heavy and somewhat offensive," as the old herbalist has it-were in curious contrast with the delicate pencilling of the flowers. The common was now looking at its best. The ling and heather were in full bloom, and mingling with their bright purple flowers was the rich yellow of the dwarf furze, which, unlike the common and larger kind, blossoms in September. Truly, "art" could not rival that "pomp of purple and gold."

### CHAPTER XVIII

#### THE SUFFOLK SHORE

THE sea-shore of Suffolk, which stretches from Landguard Point at the mouth of the river Orwell over against Harwich to the denes of Lowestoft and Yarmouth, while it cannot be called remarkable for its beauty or romance, is yet full of interest to the naturalist. The coast-line is cut up by several deep and narrow estuaries, which add much to the picturesqueness of the scenery. Steamers are constantly plying between Felixstowe and the Essex shore. Ferries cross the river Deben at Bawdsey, and the Blythe at Walberswick. Here and there low-lying hills succeed to the long stretches of shingle or of sandy dunes, as at Covehithe, and Dunwich where the crumbling cliff is crowned with the ruins of an ancient church.

The sandy spit of Landguard Common, on which stands the fort immortalized by one of Gainsborough's best-known pictures, is famous as the scene of the last fight on English soil with a foreign enemy. In July, 1667, when the fortunes of England were at a low

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ebb, a Dutch force landed beneath the cliff on which the modern town of Felixstowe now stands, and made its way to Landguard Fort, about a mile distant, with a view to seizing eventually the king's stores at Harwich. But the gallant men of the Suffolk shore—from Lowestoft, Southwold, Dunwich, and Aldeburgh—were all ready for the invaders, and drove them back with slaughter to their ships. One of the Dutch scaling-ladders, captured on the occasion, is still preserved as a memento of the fight.

In former times this sandy spit of land was known as "Langtree Point." Thus in Gerarde's Herbal, published in 1598, we find that the old herbalist, passing over the water from Harwich, found "the sea holly growing plentifully upon Langtree Point, from whence," he adds, "I brought plants for my garden." The sea holly (Eryngium maritimum), known from its Latin name as "Eryngoes," was much sought after in those days for its medicinal properties, and the calling of an "eryngoe-digger" is referred to by Sir Thomas Browne, the celebrated physician and antiquary of Norwich. Gerarde gives minute instructions as to the "conditing" of the roots, which, it appears, are "of the

bignesse of a mans finger, so very long, as that they cannot be all plucked up but very seldome." When "properly preserved with sugar," the roots, we learn, "are exceeding good to be given to old and aged people that are consumed and withered with age."

The sea holly still grows on Landguard or Langtree Point, and many another rare and interesting plant. On the sandy turf, creeping among the bents and sedges, the sea convolvulus, with its large, beautifully striped pink and white flowers, was plentiful last summer; scattered over the common might be seen splendid plants of the blue viper's bugloss, and straggling bushes of the yellow melilot. One side of the sloping ramparts of the fort was completely covered with the yellow horned poppy; while on the side facing the Essex shore were goodly thickets of wild fennel and groves of the common tamarisk. The rare and local yellow vetch with solitary flowers (Vicia lutea) was to be found in bare stony places, and several large patches of the real samphire (Crithmum maritimum), a plant not found in Suffolk until quite recent years.

Very characteristic of the Suffolk shore are vast ledges of shingle, which sometimes run

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for many miles. The greatest in extent is the one, anciently known as the "Shelf," which stretches from Aldeburgh to the "North Vere," the scene of the fierce fight between the smugglers and the preventive-men in Cobbold's story of Margaret Catchpole. For twelve miles or more this lonely "shelf" of shingles separates the Alde from the ocean; and is seldom visited except by those connected with the coastguard service or the Orford lighthouse, or perhaps by some wandering herbalist. Exactly opposite the North Vere Point, on the other side of Orford Haven, lies the little hamlet of Shingle Street, so called from its strange situation. The cluster of black-boarded, red-tiled cottages looks very picturesque on the shingle shore, beside the coastguard station, the lifeboat house and the old martello tower. The hamlet is difficult of approach; no regular road leads to it; only a circuitous sandy track from the village of Hollesley, some miles away. Flowers blossom in the little gardens before the cottage doors, and it is indeed wonderful how plants contrive to live among the stones. If, said the captain of the coastguard, you scatter some wallflower seed on the shingle it will germinate, and most seasons a few potatoes

will show themselves. The hamlet is protected from the tide by several vast ledges of shingle. Ridge after ridge of pebbles guard the station. And on this desert of stones wild species manage to thrive as the wallflowers before the cottage windows. Several fine patches of the scarce sea-pea (Lathyrus maritimus) or wild-tares, as the plant is locally called, were in blossom; the great yellow horned poppy made a brave show beside tall plants of red rumex and white sea campion; while in places the exquisite little ivy-leaved linaria completely covered the stones with its delicate foliage and flowers. On one spot the shingle was hidden beneath a carpet of yellow stonecrop (Sedum reflexum), which had managed to become naturalized on the shore. Still the fishermen said the plant had always flourished there; and moreover that it was to be found in several places along the coast, the same as the sea holly and the wild-tares.

Shingle Street is some seven miles from Orford where the fine old Norman tower still remains, in which, according to Ralph de Coggeshall, a strange creature was once incarcerated. We are told—

that in the year 1180, near unto Orford in Suffolk,

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certain fishers took in their nets a fish having the shape of a wild man in all points; he had hair on his head, and a long picked beard, and about the breast was exceeding hairy and rough; which fish was kept by Bartholomew de Glanvile, the Governor, in the Castle of Orford six months or more. He spake not a word: all manner of meats he did gladly eat, but most greedily raw fish. Oftentimes he was brought to church, but never showed any sign of adoration. At length, being not well looked to, he stole to the sea, and never was seen after.

It is well known that the Suffolk coast is suffering more from the encroachment of the sea than any other in England. This is specially noticeable at certain spots. The house in which George Crabbe was born at Aldeburgh was swept away by the sea in 1779. Some low cliffs near Easton Broad. known as Easton Ness, were formerly the most eastern point in England, until the erosion of the coast "robbed the parish of that distinction." The disappearance of the ancient city of Dunwich is another instance of the ravages of the sea on the shore of Suffolk. Once the capital of East Anglia; for many years the seat of the East Anglian bishopric: a city of splendid churches, and more than one stately priory; a few ruins alone remind us of its former greatness. We learn from an ancient source that "before the twentythird year of the reign of Edward III upwards

of four hundred houses, with certain shops and windmills, were devoured by the sea. St. Leonard's Church was next overthrown; and in the fourteenth century St. Martin's and St. Nicholas' were also destroyed by the waves." Since then the work of destruction has continued, and now all that is left of the once splendid city are the ruins of All Saints' Church, which crown the summit of the crumbling cliff, and hard by the picturesque remains of the old Franciscan Priory. What a change time and tide have wrought!

Here, where sharp the sea-bird shrills his ditty,
Flickering flame-wise through the clear live calm,
Rose triumphal, crowning all a city,
Roofs exalted once with prayer and psalm,
Built of holy hands for holy pity,
Frank and faithful as a sheltering palm,
Church and hospice, wrought in faultless fashion,
Hall and chancel bounteous and sublime.

Now in the desolate churchyard—"dust, and grass, and barren silent stones"—beneath the hollow wind-swept tower,

Tombs with bare white piteous bones protruded, Shroudless, down the loose collapsing banks, Crumble, from their constant place detruded, That the sea devours and gives not thanks. Graves where hope and prayer and sorrow brooded Gape and slide and perish, ranks on ranks; Rows on rows and line by line they crumble, They that thought for all time through to be.

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Several rare plants haunt the ancient ruins. On the mediæval walls of the Franciscan Priory, near the broken gateway, some fine specimens of the hoary mullein (Verbascum pulverulentum), with its large flannel-like leaves and racemes of yellow flowers, were in blossom last summer, in company with the wall-rocket (Diplotaxis tenuifolia), a scarce and local species. The wild larkspur was in flower among the long herbage and fallen masonry of the churchyard, and nestling under the shelter of the hollow tower was a goodly-sized patch of that striking little East Anglian species, the sickle medick. Another very scarce plant, the field eryngo (E. campestris), found by Adam Buddle on "ye coast of Suffolk," in 1697, was growing as late as 1856 " at the foot of the clay cliffs at Dunwich," but it is now lost through the inroads of the sea. Nor must we overlook the little burnet rose, the most delicate of our wild roses, which is not uncommon in the neighbourhood. This species, it seems almost certain, is what is traditionally known as-

The Dunwich rose, with snow-white blossom, Soft, pure, and white as is the cygnet's bosom; This decks the stern and sterile cliff, and throws O'er its rough brow new beauty where it grows.

#### CHAPTER XIX

#### WINTER SLEEP

During the wintry weather such as marked the closing week of last year, when the mercury went down to within a few degrees of zero and a vast snow covered the land, many wild creatures suffered severely. The wild red deer of Exmoor as well as the humble rabbit on the hillside were hard pressed for food, and the timid hare was forced to invade gardens and allotment-grounds. But the birds suffered the most.

When icicles hang by the wall,
And Dick the shepherd blows his nail,
And Tom bears logs into the hall,
And milk comes frozen home in pail,

it is possible, as the great poet says, that

Then nightly sings the staring owl Tu-whit, to-who, a merry note;

but the rest of the "tuneful tribe" are silent. They are encountering a hard struggle for existence. Some species suffer indeed more than others, but almost all birds endure dire privation during a prolonged spell of winter weather, and numbers of blackbirds and

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thrushes, of fieldfares and redwings, perish of starvation.

To the rigorous reign of winter a large number of creatures are, on the other hand, sublimely indifferent. The icy north-east wind may sweep across the frozen land, but they are unconscious of it. Food may be impossible to obtain, but they are wholly indifferent to it. They have adopted a striking and successful device for overcoming the difficulties of existence during the cold months. They are securely asleep in their winter quarters. This method of passing the winter has been adopted by the various tribes of insects, including moths, butterflies and beetles, by the whole of the British reptiles, and by several species of our indigenous quadrupeds.

Of all the phenomena of natural history there is none stranger than this of winter sleep. During the period of hibernation the functions of Nature are almost entirely suspended. Respiration is greatly reduced, circulation is extremely slow, sensation is quiescent. In many instances the power of digestion entirely ceases. What the problem of migration is with regard to birds, that is hibernation in respect of reptiles and of

certain species of quadrupeds. As autumn advances, late or early according to the nature of the season, all our native reptiles retire to their winter quarters. The common or ringed snake seeks some sheltered and sequestered spot, such as the hollow roots of a decaying tree—a very favourite locality—or beneath the dead leaves and brushwood of a hedgerow, where coiled together with others of its species, it passes the cold season in absolute torpidity. The viper, too, like the common snake, usually hibernates in company, and several may sometimes be found entwined together when an old hedgerow is stubbed up in winter time. Similar situations are sought by the humble slow-worm, or blind-worm, which, however, with its rounded muzzle and smooth-polished body, will often penetrate some distance into the soft soil before composing itself for its winter's retirement. Frogs and toads, similar as they are in appearance, differ widely in their method of hibernation. The toad chooses for its retreat some sheltered hole in a hedge-bank, or hollow space amongst a heap of stones, while the frog almost invariably hibernates in the mud at the bottom of ponds. Sometimes when a pond is being cleaned out in winter-time a multitude of these amphibia

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will be found closely clinging together in one conglomerate mass.

But if it is a matter of wonder that cold-blooded creatures like frogs and lizards, with their tardy circulation and their entire dependence upon external heat to carry on the functions of life, should thus be able to maintain existence for many months in a state of slumber, it is far more surprising in the case of warm-blooded animals. And yet for many of these, too—the bats, the squirrel, the dormouse, the hedgehog, the badgerthe severest winter has no alarm. Of our native quadrupeds the hibernation of the hedgehog is perhaps the most complete. Unlike the squirrel and the dormouse, it lays up no provision for the cold months. But early in autumn it retires to its warm nest of withered leaves, situate in some sheltered spot, where rolling itself up into a ball it passes the winter season. In one of the Letters of "Rusticus." dated January 17, 1835, the author relates how on a keen, crisp, frosty day in January his little dog "Cap" poked his nose into a deserted rabbit-hole in a bank at Eshing Bridge, near Godalming.

<sup>&</sup>quot;After a while," he says, "I heard from the bowels of the earth a yelling that plainly announced the

discovery of some phenomenon in natural history. The hole was very large, and the end was filled with leaves; after trying a good many contrivances that did not answer, I hit on one that did, and I hauled up a lump of dried leaves about as big as my head; outside the leaves were loose, further in, close and tight, and after taking off layer upon layer, I felt some sharp instrument run into my hand, and I knew for certain that I had in my hand what I had often longed for, a somnolent hedgehog. I took him home, woke him up with a gentle warmth, and had the intense satisfaction of seeing him wander about a Brussels carpet, with his leafy great-coat on his back, making him look for all the world like some new species of Armadillo. When he had satisfied my curiosity I had a sackful of dry leaves shot down in a corner of the cellar, and in these I let piggy take out the rest of his nap, of which, as it afterwards appeared, a term of forty-one days was then unexpired.

On warm days in winter the squirrel will awaken for a few hours from its state of slumber, and visit its hoard of food consisting of nuts, acorns, and beech-mast, usually deposited in some secure hiding-place in the near neighbourhood of its own retreat. The dormouse will do the same; and sometimes on a mild day, even in January, the pipistrelle or flittermouse, the commonest of our British bats, will be seen hawking for gnats in the winter sunshine. Very curious is the way in which bats compose themselves for their winter sleep. They retreat, often in considerable numbers, to some retired place, such as the roofs of old houses, church belfries,

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barns, outhouses, hollow trees or caverns, where they suspend themselves by their hinder claws, hanging head downwards. Large masses will sometimes be found together. clinging not only to walls and rafters, but also to each other. Over four hundred were discovered in the belfry of a Suffolk church last winter. Each species of bat seems to have its own favourite place of hibernation, though oftentime different kinds will be found herding together. The noctule or great bat is a tree-loving species, and likes to take its winter sleep, which often lasts from the middle of September to the middle of March, in some hollow pollard or yew. The long-eared bat, on the other hand, prefers the roofs of houses; while the little flittermouse betakes itself to any convenient situation, the overhanging eaves of houses or the crevice of an old wall.

Thus to the bats, huddled together in the church tower or in the deep recesses of a decayed tree, the bitter cold of winter causes not the slightest inconvenience or distress. Like other hibernating creatures they are in a state of unconscious slumber. The snow may be piled up in heavy drifts along the hedgerows, but underneath, curled up in its mossy nest, the dormouse sleeps in safety. The wind

may whistle through the naked branches of the trees, but the squirrel heeds it not. The badger remains in peaceful security in the further recess of his subterranean cavern. The ponds may be frozen over, but the frogs and newts, imbedded in the mud below, are totally unconcerned. What Thompson calls the "dread winter" has no terrors for these happy sleepers.

### CHAPTER XX

#### BOTANICAL NOMENCLATURE

THE appearance of the tenth edition of the London Catalogue of British Plants (the first edition was published as far back as 1844) suggests many thoughts with regard to botanical nomenclature. The catalogue itself is simply a useful working list of British plants, arranged in their scientific order, and showing by means of numbers the relative frequency of the various species. It is invaluable as an index catalogue to the herbarium, for purposes of exchanging specimens, and for making lists of local plants. The names of the species are given, not in English, but in Latin, the scientific appellation being employed which has at length found general acceptance among botanists.

It is sometimes regretted that the science of botany is encumbered with what seems to be a strange and uncouth language, and the wish has been often expressed that it were possible to designate British plants simply by British names. The briefest consideration is, however, sufficient to show that, for scientific

purposes, among botanists of different nationalities, a uniform system of nomenclature is necessary. Charming and full of interest as are the old English names of wild flowers, they are totally inadequate, as experience has shown, for the purpose of identification. The dense confusion with regard to the verification of species which existed in England and on the Continent up to the time of Linnæus affords abundant evidence on this point.

The history of botanical nomenclature is one of no little interest. It dates back to the far-off days of the fathers of botany, to Theophrastus and Dioscorides, to Pliny, Galen, and Apuleius. To Dioscorides especially, a military physician who flourished in the days of Nero, belongs the honour of laying the foundation of what may be regarded as a universal system of naming plants. The most characteristic feature of his famous book, the Materia Medica, or "Things fit for Medicine," consists in a collection of synonyms from various languages, and it was from this repertory, as Professor Earle has pointed out, that "a vocabulary of plant-names was formed which became central for the educated world." With the revival of learning in the fifteenth century a fresh interest was awakened

in botanical studies. The Materia Medica was printed, the Latin translation in 1478. and the original Greek a few years later, and for a long period it appears to have been the chief aim of botanists to verify the plants described by Dioscorides. Many commentaries on the book appeared, which culminated in the work of Matthiolus, an Italian physician, in honour of whom the family of stocks bears the generic name Matthiola. In addition to the old methods of verification, namely, those of synonymy and of comparative description, the practice of figuring the plants became very general in the sixteenth century, and afforded, it must be allowed, considerable assistance in the identification of species. In spite, however, of the use of woodcuts much confusion prevailed. The greatest difficulty was experienced in determining what plants answered to what names, and as time went on the nomenclature became more and more "swamped in an overgrown synonymy." Many attempts were made to remedy the disorder that prevailed, among the most successful of which must be mentioned Gasper Bauhin's great work, published at Basle in 1623, entitled Pinax Theatri Botanici. He sifted the existing literature, made a

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concordance of the synonymy, selected what he considered the best names, and affixed them to their plants; and for a long time, we learn, it became the mark and test of a true botanist to call a plant by Bauhin's approved name. The confusion, however, was only partially overcome, and in the second half of the seventeenth century we find John Ray in the Preface to his *Catalogue of Cambridge Plants* still complaining of the difficulty of ascertaining "what plants belong to what names."

In this condition of uncertainty the science of botany remained till the days of the great Linnæus. And then, according to the legend inscribed beneath one of his portraits, we learn that "Deus creavit: Linnæus disposuit!" And it will be at once and gratefully admitted that Linnæus introduced order, precision, and certainty into the realm of botanical nomenclature. This he accomplished by means of his artificial system, and his binomial method of naming plants. Each species was henceforth to have but two names, a generic and a specific one. The one had reference to his artificial system; the other determined the individual plant. The one was to be, as it were, the surname; the other

was to distinguish the different members of the family. And in constructing his famous nomenclature Linnæus laid down thirty-one canons which should guide him in his work. The old classical names of Dioscorides and Pliny were to be respected. An ancient generic name was not to be altered to one more modern, even though it might seem to be for the better. If new names were wanted they were to be sought among existing synonyms, such as might be found in Bauhin's Pinax. Single words, and not sentences, were to be employed alike with regard to families and species.

It is interesting in the light of these canons to examine the London Catalogue, and to notice the way in which Linnæus carried out his own rules with regard to botanical nomenclature. It is astonishing how many of the Latin names of plants, both generic and specific, are due to him. The abbreviation Linn. or simply L. following the scientific description, indicates that the name is the one given or approved by Linnæus, and the merest glance at any flora will reveal our indebtedness to the genius of the great botanist. In accordance with his rule that the ancient classical nomenclature should, whenever

possible, be retained, we find that a goodly number of generic plant-names may be traced back to the Materia Medica of Dioscorides. or to the writings of Pliny and Galen. Among the old Latin names of genera or families will be noticed Viola, Rosa, Prunus (plum), Rubus (bramble), Vicia (vetch or tare), and Tilia (linden or lime tree). The old Greek names are retained in Conium (hemlock), Daucus (carrot), Mentha (mint), Asparagus, Orchis, and other cases. In some instances the name indicates that among the early herbalists the plant was in request for its medicinal properties. The genus *Potentilla* was so named because of the powerful virtue supposed to reside in some of the species. The name Salvia has reference to the healing properties of sage. The famous French botanist Tournefort, who died in the year following that in which Linnæus was born, had already bestowed the names Pulmonaria and Scrophularia on two families of plants, used respectively in lung complaints and in scrophulous diseases, and these terms the great Swedish botanist retained; as he did also that of Euphrasia, bestowed by Tournefort on the little plant known among ourselves as "Eyebright" in allusion to its

reputed qualities in certain affections of the eye. .

Again, generic names, such as indicated some striking peculiarity in the family, were much to be commended; in the opinion of Linnæus they were "the best of all." Hence to a family of plants that inhabits sandy places he gave the name Arenaria; to another that loves muddy situations Limosella; to a third with bladder-like pitchers in the leaves. Utricularia. The three leaflets of the clover or trefoil suggested the happy name Trifolium; and the chequered petals of the snake's-head. a plant abundant in the damp meadows of Oxford, the name Fritillaria, from a Latin word meaning a dice-box. In like manner Tournefort designated the family of Gromwell Lithospermum, from their stony seeds, and the Marjoram Origanum, from its frequenting hilly places.

Proper names, whether of persons or of localities, might also appropriately be used to designate a genus. Thus the name *Iberis* was given by Linnæus to the family of Candytuft because of the many species which grow in Iberia or Spain. In like manner the *Tamarix* is so called because the plant abounds on the banks of the river Tamaris in the same

country. From the early days of botany it had been customary to dedicate certain plants to the honour of distinguished persons. Thus the old Greek name, Euphorbia, commemorates the physician of Juba, a Moorish prince, and Gentiana immortalizes a king of Illyria. The same method of preserving the memory of benefactors to the science was followed by Linnæus, and the generic names of many plants commemorate some famous botanist. He himself selected the lowly Lapland flower Linnæa borealis, "long overlooked, depressed, flowering early," as the most appropriate species whereby to transmit his name to mankind. In his entertaining book, Critica Botanica, Linnæus has in several instances drawn a fanciful analogy between botanists and their appropriate plants. Thus, the genus Bauhinia, named after the two distinguished brothers Gaspard and Jean Bauhin, already mentioned, has a two-lobed or twin leaf. Magnolia with its noble leaves and flowers, and Dillenia with its beautiful blossoms and fruit, serve to immortalize two of the most meritorious among botanists. Again, the genus Scheuchzeria, a grassy Alpine plant, to be found in Yorkshire and Scotland as well as in the Alps, commemorates the two

Scheuchzers, Swiss botanists and correspondents of Linnæus, one of whom excelled in the knowledge of Alpine productions, and the other in that of grasses. Other friends and assistants of Linnæus are commemorated in the following genera, which find a place in the London Catalogue of British Plants: Montia or water-blinks, after J. de Monti, an Italian botanist; Ludwigia, after Ludwig of Leipsic, who seems to have first discovered the plant; Sherardia, or field-madder, from the eminent English botanist Sherard, who founded the Chair of Botany at Oxford, and bequeathed to the University his library herbarium of 12,000 species; and Sibthorpia, in honour of Dr. Sibthorpe, who afterwards succeeded Dillenius in the Professorship of Botany which William Sherard had established. A few other English names are commemorated in our flora. The pretty little Teesdalia, abundant on the sandy heaths of Woolmer Forest and elsewhere, is so called after Robert Teesdale, a Yorkshire botanist who was gardener to the Earl of Carlisle at Castle Howard. Another Yorkshire botanist is commemorated in the genus Tofieldia. The zealous labours of Miss Hutchins are remembered in the genus Hutchinsia, and those of

Sir Thomas Gage, of Hengrave Hall, Suffolk, in Gagea. The beautiful little Alpine fern Woodsia, to be found on wet rocks in Scotland and North Wales, is named after an eminent botanist, Joseph Woods, who added several new plants to the British Flora. Two of our orchids are named after English botanists. Listera, or Tway-blade, commemorates Dr. Martin Lister, a friend and correspondent of the illustrious John Ray; and Goodyera, a very rare species sometimes found in fir woods in the north, recalls the services of Mr. John Goodyer, of Maple Durham in Hampshire, "a great lover and curious searcher of plants," who first brought to light a number of rare English species. One other name must be mentioned, that of Edward Lloyd, or Lywyd, the celebrated antiquary, who became Keeper of the Ashmolean Museum at Oxford about the year 1690. He travelled repeatedly, we are told, "all over Wales," and discovered several new species. Among them, on the rocky ledges of Snowdon, he came across the lovely little Alpine plant, till then not known to exist in Britain, which is now called after its first discoverer, Lloydia.

The generic name, consisting, as we have

seen, of a single substantive, being fixed, Linnæus, adopting a hint thrown out by Professor Rivini of Leipsic, proceeded to construct what he called trivial or specific names. A trivial name was to consist of one single adjective, expressive, as far as possible, of the essential specific differences among the individuals of the genus, or failing this, of some striking and obvious character. Thus the name of each plant was to consist of two Latin words, and two only, the one, a substantive, with reference to the family or genus, the other, an adjective, with reference to the individual or species. And in the selection of his trivial or specific names the genius of the great botanist is most conspicuous. He possessed the happy faculty of seizing upon some characteristic of a species which distinguished it from its near relatives, and of describing it in a single Latin word. Thus, by way of illustration, there may sometimes be seen on sandy shores an inconspicuous grass which, if pulled up, will be found to possess a bulbous root. The only method of referring to it was by fully quoting its scientific description, as follows: Gramen Xerampelinum, meliacea, praetenuis ramosaque sparsa panicula, sive Xerampelino congener,

arvense, aestivum; gramen minutissimo simene! Linnæus at once recognized its distinctive characteristic, and named it *Poa bulbosa*, by which simple but unmistakable designation it is now known to botanists throughout the world.

Certain rules or canons were laid down by Linnæus with regard to the trivial or specific names, on the same lines as those which obtained in the case of genera. A trivial name, as we have seen, should embody some striking characteristic of the plant which should easily distinguish it from others of the same family. We often therefore meet with terms which have reference to the form of the leaf or inflorescence, to the colour of the flowers, to the time of blooming, to the place of growth, sometimes to the name of the discoverer. Thus, we have in the British flora three species of the genus Melampyrum, or cow-wheat, which in addition to their scientific distinctions, vary in their habitat or situation. They are to be found respectively in pastures, in woods, and in cornfields. Linnæus therefore distinguished the species thus, Melampyrum pratense, M. sylvacticum, M. arvense. The family of Sedges, which bears the generic name of Carex, is a large and

intricate one, and to have found suitable names for the many species must have taxed the ingenuity even of the Swedish botanist. In many instances he made their place of growth the mark of distinction. We meet with Carex arenaria (growing in sandy places), rupestris (on rocks), montana (in mountainous districts), saxatilis (among stones), sylvatica (in woods). The time of flowering often makes an excellent distinction. There are two species of the beautiful Leucojum or snowflake to be found in England, which were thus distinguished by Linnæus, L. vernum (flowering in the spring), L. æstivum (in the summer). A similar distinction marks two species of Scilla, or Squill. There is S. verna, so abundant on the cliffs of Cornwall and Wales in early spring, and S. autumnalis. The same specific term distinguishes the delicate orchid known as lady's tresses from its spiral inflorescence (Spiranthes), from its exceedingly rare relative which blossoms in July in a single bog in the New Forest. The colour of the flowers often supplies the necessary term. There is a white and a yellow mignonette, Reseda alba and R. lutea; and a white and a yellow water-lily. We meet with a green hellebore (H. viridis), a red valerian

(C. ruber), a blue orobanche (O. carulea), a tricoloured violet (V. tricolor) or heartsease. Not infrequently the specific name has reference to the shape of the leaf. It provides, for instance, an excellent distinction in the case of the curious carnivorous species, abundant in many of our bogs, known as Drosera or sundew. It is impossible to confuse D. rotundifolia with its orbicular leaves, with D. longifolia with its oblong ones. Or perhaps some striking characteristic of the plant suggests its specific name. To the stinging nettle, concerning which the old herbalist tells us that it may be found by feeling on the darkest night, Linnæus gave the not inappropriate epithet urens (burning). The sweet violet he called V. odorata, and the "stinking hellebore" H. foetidus. The opium Poppy he named P. somniferum, and the wild cabbage, abundant on the cliffs at Dover and Dartmouth, the parent of our garden varieties, he called Brassica oleracea (used as a potherb). The term officinalis repeatedly occurs, and signifies that the plant had a recognized place in the Materia Medica, and was known among herbalists by that name. The wild hyssop, scurvy-grass, water-cress, eyebright, lungwort, the vervain, sacred with the

mistletoe to the worship of the Druids, all possess the specific name officinalis.

In a few instances only proper names are used as specific terms: they have generally been reserved for the names of genera. Still we find a Potentilla called after Sir Robert Sibbald, the first Professor of Medicine in the University of Edinburgh, a knot-grass after our own great naturalist John Ray, and a Viola after William Curtis, the author of the Flora Londinensis. The employment of geographical terms is hardly to be commended, as few plants are sufficiently local to justify their use. The globe-flower (T.europaus), it is true, is confined to Europe; but the bladderseed (P. cornubiense) is found in Devon as well as in Cornwall, and the lovage (L. scoticum) elsewhere than in Scotland. Outside the limit of our English flora, we find one or two satirical epithets which, as Sir James Smith, the founder of the Linnæan Society, said, "stain the purity of our lovely science." Among these he mentions Buffonia tenuifolia as a well-known satire on the slender botanical pretensions of the great French zoologist, and Hillia parasitica as "an equally just one" on our pompous Sir John Hill, Knight of the Polar Star.

It will be allowed, from these illustrations, that though "what we call a rose by any other name would smell as sweet," yet that there lies buried behind the names of British plants, in Latin no less than in English, a history of no inconsiderable interest. "The fascination of plant-names," wrote Professor Earle in his charming little book on English Plant Names from the Tenth to the Fifteenth Century, "has its foundation in two instincts, love of Nature, and curiosity about Language. Plantnames are often of the highest antiquity, and more or less common to the whole stream of related nations. Could we penetrate to the original suggestive idea that called forth the name, it would bring valuable information about the first openings of the human mind towards Nature; and the merest dream of such a discovery invests with a strange charm the words that could tell, if only we could understand, so much of the forgotten infancy of the human race." The truth of these words will readily be admitted. And the fascination of the study may also be allowed to extend to that of the more modern nomenclature, which, following the lead of Linnæus, is now practically accepted by the scientific world. The apparently dry list of Latin names contained

in the London Catalogue will be found to embody a story of botanical ingenuity and enterprise, the interest of which can hardly be exaggerated.

## CHAPTER XXI

#### AN ISLAND FLORA

FAMOUS as is the Isle of Wight for its quiet charm and natural beauty, it is no less celebrated in the estimation of botanists for the extent and richness of its flora. This is doubtless due not only to its mild and equable climate, which enables the myrtle, sweet bay, and other half-hardy shrubs to flourish luxuriantly in the open air, but also to the varied nature of its soil and scenery. Possessing an area of about 100,000 acres, the island is roughly divided into two nearly equal parts by the fine range of chalk downs which stretches from the Culvers on the east to the Needles on the west. The downs, which support their own special flora, vary considerably in height, the loftiest being St. Boniface Down, at the back of Ventnor, which rise to nearly eight hundred feet above the sea-level, and St. Catherine's Down, above the gloomy recesses of Blackgang, which is only a few feet lower. To the north of the central line of chalk hills the geological formation consists chiefly of tertiary clays, and in former

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times this district was so thickly timbered that a squirrel, so the legend ran, might have traversed the entire length by leaping from tree to tree. It is still well wooded. especially in the neighbourhood of Brading, and along the course of the stream which empties itself into the Solent below Wootton Bridge; and, moreover, Parkhurst forest, though sadly reduced in extent, still occupies some 3,000 acres. This part of the island is intersected by several tidal streams and estuaries, on the banks of which many littoral plants flourish, and towards Yarmouth, in the neighbourhood of Newtown and Shalfleet, some disused salterns afford favourable conditions for several interesting species. The southern portion of the island, which is of a different geological formation to that which prevails on the north of the central chalk range, varies much as we should expect, in the nature of its flora. Though less wooded than the northern side, it is far more picturesque, and in the fine district of the Undercliff, which stretches from Shanklin past Luccombe Chine and Bonchurch to Blackgang, possesses some really beautiful scenery. Inland, too, in the neighbourhood of Godshill and Appuldurcombe, the country

lanes are most fascinating, and afford shelter to many interesting flowers. The coast-line of the island, again, is varied in character, and therefore in the flora which it maintains. At Norton, near Yarmouth, and again at St. Helen's, there are stretches of blown sand, known locally as spits, which support a rich number of species delighting in such situations. We have already alluded to the muddy creeks and estuaries which run up from the Solent at Wootton and Newtown and elsewhere on the northern coast. The white chalk cliffs of the Culvers, and those at Compton and Freshwater, possess again their own flora, which gives way to other species when we approach the red cliffs of Sandown, and those of the Undercliff and Totland Bay.

Bearing these varied conditions in mind, we are less surprised at the remarkable richness of the island flora. Though possessing an area but one-tenth in size of that of the mainland of the county of Hampshire, the latter only produces—so we learn from a comparative table published in the last edition of *The Flora of Hampshire*—183 species not found in the island, while the island can boast of twenty-two species, several of great interest and rarity, which have not been recorded for the

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mainland of the county. Among the Hampshire species which are wanting in the island we notice the remarkable absence of yews and junipers. Although the geological conditions are identical, yet, to quote the words of the author of the Flora Vectensis: "Our downs are not, as in Hampshire, crested with picturesque and venerable yews of unknown antiquity, or dotted with dark compact clumps of the more humble but aromatic juniper." Beech-hangers, too, so characteristic of Hampshire scenery, as at Selborne and in the neighbourhood of Petersfield, are unknown in the Isle of Wight. The botanist will also look in vain for such striking mainland species as the long-leaved sundew, the round-headed rampion, the marsh gentian, the deadly nightshade, the sweet-scented Daphne mezereum, the lily-of-the-valley, herb-paris, the musk orchid, and Solomon's seal. On the other hand, as will appear in the course of this paper, the island can claim such a number not only of individual species, but of rare and choice ones, as to render its flora of exceptional interest to all lovers of British plants. But, rich as is the island flora, alike in the number and rarity of its species, it is only in comparatively recent years that it has attracted the

attention of botanists. Until the introduction of steamers and railways, the island was, no doubt, difficult of approach, and this, perhaps, is the explanation of the strange neglect with which its flora has been treated. While on the mainland of the county we meet with an almost continuous stream of records from the days of the early botanists in the sixteenth century, the flora of the Isle of Wight, so far as its literary history is concerned, can hardly be said to begin before the closing year of the eighteenth century. It is true that we meet with one or two records in the writings of the "early fathers" of English botany; but, with these exceptions, the first list of island plants is one contained in a paper on Hampshire botany which appeared in the pages of The Annual Hampshire Repository for the year 1799. Of the early records, which, partly because they are so rare and partly for their own interest, deserve to be noticed, the earliest is the statement of Dr. William Turner in the second part of his Herbal, published in 1562, that the wild madder "groweth in Germany, and also in Englande. And," he adds, "the moste that ever I sawe is in the Yle of Wyght." It is all the more strange, seeing that he evidently visited the

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island, that this sentence is the only allusion to its flora. In Gerarde's famous *Herbal*, published in 1597, we find the notice that the "Rocke Samfier grows on the rocky cliffs of the Isle of Wight." There is also the remark in a posthumous work of Matthias de Lobel, who died in 1616, that "the Sea Cabbage or Sea Colewort grows at Dover and in the Isle of Wight." This fine plant, which is still abundant on the white cliffs of Dover, was also to be seen at the Culvers as late as 1856, but it has now unfortunately disappeared.

In the year 1634 Thomas Johnson, a London apothecary, well known as the learned botanist who brought out the enlarged and amended edition of Gerarde's Herbal, published an account under the title of Mercurius Botanicus, of a "herborizing journey" which, in company with a few like-minded friends, he undertook for the express purpose of collecting rare plants. The journey, which only occupied twelve days, was by way of Oxford to Bath and Bristol, and back by Salisbury, Southampton and the Isle of Wight, and from thence by Portsmouth and Guildford to London. He described in his Latin pamphlet the details of the expedition and added a long list of indigenous and other plants which were met

with on the journey. Unfortunately, a short time only was spent in the Isle of Wight. Landing at Cowes, the party rode to Newport, visited Carisbrooke Castle, and returned on horseback to "Ride," where they embarked in a small boat for Portsmouth. Still short though the visit was, there was ample opportunity for botanical observation, and it is disappointing to find only one or two plants mentioned as growing in the island. Gerarde's statement is repeated that "Sampire grows on the white cliffes on the south side of the Isle of Wight," but the only species specially recorded is the annual mercury, which was found plentifully "by the Seaside at Ride." Among other early records we find the simple statement in Parkinson's Theatrum Botanicum, published in 1640, that the "White Sea Campion grows in many places by the Seaside in the sayd Isle," and Merrett in his Pinax (1666) states that "Mr. Morgan received the Tree Mallow from the Isle of Wight."

After these very scanty allusions many years pass by without any further information with regard to the island flora. Hudson's Flora Anglica, the standard authority of the eighteenth century, the first edition of which was published in 1762 and the second in 1798,

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though containing many entries as to the localities of rare species, has not, I believe, any reference to the flora of the Isle of Wight. It is with the "List of Rare Hampshire Plants," contributed by Messrs. Garnier and Poulter to The Annual Hampshire Repository in 1799, that our first real knowledge of the island flora begins. The paper is of great interest and value as giving the localities of many rare species which were to be found in the county at the close of the eighteenth century. Some thirty species are given as growing in the island, most of which continue to flourish in their old localities, though several have disappeared before the encroachments of building and civilization. This, as we shall see, is especially the case in the neighbourhood of Ryde and at Sandown, which towns can hardly be said to have existed 100 years ago. Garnier's list of rare plants marks the awakening of botanical interest in the Isle of Wight.

During the first half of the last century many competent observers were engaged in the fascinating task of searching after the unknown treasures of the island flora. In 1823 "an arrangement of the more rare and interesting plants" was published under the

title of Flora Vectiana, by one W. D. Snooke, who had evidently given considerable care and attention to the subject. In John Curtis' beautiful British Entomology, which appeared in parts during the years 1824-36, several illustrations of rare plants are taken from specimens gathered by the author in the Isle of Wight, among which may be specially mentioned Dame's violet, the exquisite woodvetch, still growing in the copse where Curtis found it, and the rich blue evergreen alkanet, which he gathered at Niton. "Some years" before 1841 John Stuart Mill paid a visit to the island, and published the results in The Phytologist for that year. Most of his plants may still be seen in their old localities; but one, as we shall notice, has entirely disappeared not only from the Isle of Wight, but from the South of England. When in the year 1836 the distinguished botanist, Dr. Bromfield, came to reside in the island, he found several able observers already engaged in the study of its flora and ready to communicate to him their knowledge. Among them should be mentioned Dr. Martin of Ventnor, the author of a little work on the Undercliff; Mr. Albert Hambrough of Steephill, who first discovered Arum italicum to be a British plant; and the

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Rev. James Penfold of Thorley. Dr. Bromfield died prematurely in 1851, but a few years later his great work on the plants of the island, the *Flora Vectensis*, was brought out under the joint editorship of Dr. Bell Salter and Sir William Hooker of Kew.

It must be remembered, then, that in comparing the present flora of the Isle of Wight with that which existed in the past, it is only possible to do so (except in the case of some half a dozen species) with respect to the last 100 years. Though, doubtless, for unknown ages the bee orchis had blossomed every summer on Afton Down, and the beautiful autumnal squill had put forth its delicate flowers at St. Helen's Spit, in company with the trefoils, sea-holly, and the yellow horned poppy, yet the record of their existence only dates from the time when in the closing years of the eighteenth century Messrs. Garnier and Poulter "went a-herborizing" in the Isle of Wight. In former years the most famous botanical locality in the island, more famous even than St. Helen's Spit, was what was known as the "Dover" at Ryde. On this tract of low sandy shore a large number of rare plants flourished, now, of course, utterly exterminated. Among them may be mentioned

the proliferous pink, the beautiful marshmallow, the interesting little mousetail, the sea-holly, henbane, hemlock, hound's-tongue, the milk thistle and the annual mercury, which maintained its position on the same spot where Johnson found it in 1634; above all, the grass of Parnassus, which grew on a tract of boggy ground adjoining the Dover, now lost by drainage and building, not only to the island, but probably to the county of Hants. The shore of Sandown Bay, and the Royal Heath now occupied by the town, were formerly rich localities for rare plants. When Garnier gathered Lathyrus maritimus, or the seaside everlasting pea, on Sandown Beach, the town with its esplanade did not exist. An old map dated 1810, only marks "Sandham Fort" and "Sandham Cottage." This last, situated on the Royal Heath, was the "villakin" of Wilkes, where the old demagogue lived from 1783 to 1797. Unfortunately, this cottage, "which first made Sandown famous," has long ago disappeared; but "Wilkes' Road" marks the site of the property. Close to his grounds the rare and delicate spring vetch (Vicia lathyroides, L.) used to grow abundantly; but this, its chief, if not only, station in the Isle of Wight is now

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entirely built over. The disappearance of several notable plants from the shore at Sandown may be partly due to the encroachments of the sea, and not entirely to the building of the esplanade. Be that as it may, the seaside everlasting pea is gone from the bay and is now lost to Hampshire; and the same must also be said of Euphorbia peplis, found by John Stuart Mill when he made his botanizing expedition to the island "some years" before 1841. This exceedingly rare spurge, known as the purple spurge from the intense purplish hue of its foliage, is only found in one or two localities in Britain, and Sandown is the most eastern station that has yet been recorded for the species. In the old days the most conspicuous plant about the little church of St. Lawrence and the old mediæval ruin of Wolverton was the rare and handsome hellebore or setter-wort. In 1839 Dr. Martin pointed it out to the author of the Flora Vectensis "in considerable plenty" all about the rough, stony pasture ground of the neighbourhood. Since then many houses have sprung up, and much of the land has been converted into gardens with the inevitable result that this splendid plant has become exceedingly scarce. Among other plants now

lost to the island may be mentioned the dwale, or deadly nightshade, formerly to be found near the old Jacobean manor house of Knighton, now pulled down; the seaside cotton-weed, recorded in 1823 as growing on the shore at Sconce Tower; the upright cudweed; the early spider orchis, last seen on St. Boniface Down in 1849; and the vernal squill, which Garnier found near Newport.

Although the hellebore has become exceedingly rare in the neighbourhood of St. Lawrence, yet close by the little church several choice species flourish in peace. The modest little round-leaved geranium, unknown on the mainland of Hampshire, and, indeed, elsewhere in the Isle of Wight, is plentiful on the hedge banks and waste ground near the ivy-clad ruin of Wolverton. All about Steephill the parasitic broomrape, which attaches itself to the roots of ivy-the Orobanche hederæ—will be noticed in extraordinary abundance. Not found elsewhere in Hampshire, it is plentiful enough all along the Undercliff, growing in shrubberies, on hedge banks, even on walls, accompanying its host in all directions. It was at Steephill that Garnier found the purple broomrape (O. cærulea), parasitic on

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the roots of the common yarrow, a rare and striking relative of the last-named species. This plant, distinguishable at once by its blue or purple hue, is still found in the island. Another fine species, common on the shores of the Mediterranean, but unknown elsewhere in Britain, may be seen on the white cliffs of Compton and Freshwater. This is Matthiola incana, the queen stock, or stock-gilly-flower, a truly splendid plant, with lanceolate, hoary leaves and large handsome purple flowers. It grows abundantly on the face of the perpendicular chalk cliffs, and, except by means of a rope from the down above, it is nearly impossible to obtain a specimen. Formerly this showy plant, the parent of our garden stocks, grew on the cliffs at Hastings; but the Isle of Wight is now its only station in Great Britain. How long it has flourished there, and whether the plant be truly indigenous to the island, are questions it is impossible to decide. Babbington marks the species as "possibly introduced"; Hooker and the London Catalogue regard it as a native. The plant is first recorded by Snooke in 1823 in his Flora Vectiana, where he says: "The cliffs from Compton to Freshwater-gate are covered by a Cheiranthus, not

easily accessible," A few years later it did not escape the notice of John Stuart Mill, who wrote: "Matthiola (no doubt) incana grows in inaccessible places on Compton Cliffs, Freshwater Bay." The same plant, he adds, "grows most abundantly in places overhanging the sea on the promontory of Posilipo, and other similar situations near Naples, where it flowers copiously in February, and little children collect bouquets of the plant at great apparent risk, to sell to passers-by."

In the year 1843 Dr. Bromfield had the rare fortune to discover a new species of British plant. In a beautiful and sequestered valley in the centre of the island, well wooded on either side, he found, "growing amongst the long herbage and under the shade of the bushes, in vast quantity," what was evidently a strange calamint. It was, as he truly described it, "a highly beautiful plant, with flowers of a fine rose colour, spotted with purple or even blood-red: the corolla nearly an inch long, and three times the length of the calyx." The plant turned out to be, as he imagined, the wood-calamint, a species of calamintha to be found in Switzerland and in parts of the south of Europe, and since identified as growing near Torquay in

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Devonshire. I visited the Isle of Wight Station in 1901, and found the wood-calamint, if not abundant, at any rate plentifully scattered about the bushes all along the west side of the secluded valley. It was, indeed, a striking plant as seen in its native haunts, avoiding exposed situations, and seeking the shade and shelter of the brushwood which grew here and there on the sloping sides of the down, in company with many a choice and interesting plant. The scarlet berries of the dogwood were very conspicuous among the bushes, over which the common clematis was trailing luxuriantly, and hard by, down in the rushy bottom where the ground was soft and swampy, one of the rarest and most elegant of our island plants, the sweet cyperus, or English galingale, was growing. For many days I had searched for this rarity in vain, and there in the grassy hollow it covered a space of about ten square yards. Some thirty panicles were in flower, of the richest chestnut and green, and presented, with their spreading spikelets and light green polished stems and leaves, a truly striking and semitropical appearance. The plant now is distinctly rare, being found in only seven English counties; but, formerly, before the

country was so much drained and enclosed, it was doubtless more generally distributed, for Gerarde distinguishes it as the English galingale, and speaks of it as "growing naturally in fenny grounds." The old herbalist also notices the agreeable fragrance of the sweet cyperus. "The root," he tells us, "is blacke and very long, creeping hither and thither, occupying much ground by reason of his spreading: it is of a most sweet and pleasant smell when it is broken."

#### CHAPTER XXII

#### THE ISLE OF FRESHWATER

As one stands upon the "ridge of the noble down," beneath the lofty Iona cross of white Cornish granite erected as a monument to Lord Tennyson, a glorious prospect meets the eye. On the one side "the hoary Channel tumbles a billow on chalk and sand," and on the other the beautiful outline of the New Forest, with the noble edifice of Christ Church in the distance, is seen beyond the blue waters of the Solent. The western portion of the Isle of Wight, with its picturesque homesteads and extensive woods, lies stretched out peacefully below. Beyond the tidal estuary of the Yar stands the foreignlooking town of Yarmouth, while nestling among the trees is seen the ancient parish church of Freshwater. Down below, but "completely hidden by the dense foliage of the surrounding elms, lies Farringford, the muchloved home of Tennyson. All around, and stretching away as far as the Needles, roll the soft, undulating downs, over which the poet

loved to wander and listen to the sea-birds' cry."

In former days the parish was known as "the Isle of Freshwater," and standing below the memorial beacon one realizes the fitness of the term. Close to Freshwater Gate, as the little bay is called, rises a stream of fresh water, which runs like a shining riband through the peaceful meadows completely across the neck of the peninsula, and after a course of two or three miles enters the Solent at Yarmouth. In stormy weather the waves have been known to break over the narrow barrier of shingle, and to mingle with the fresh water of the Yar, thus for a time entirely isolating the parish from the country beyond.

From an ornithological point of view, "the Isle of Freshwater," in spite of its villas and increased population, has lost none of its ancient attraction. Thousands of birds breed, as of old, and perhaps even in larger numbers, on the ledges which line the perpendicular cliffs, which stretch between the Bay and the Needles. A visit to these cliffs in the month of May, when the birds are building, is an experience never to be forgotten. Herring-gulls, puffins, guillemots, razorbills, will be seen in countless multitudes, together

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with colonies of shags and cormorants, and perhaps a pair of ravens or a noble peregrine. The way to see this wonderful sight is to take a boat at Freshwater, and to row as far as Sun Corner, a distance of some three or four miles, where all along the mighty chalk cliffs rise perpendicularly from the ocean waves to the height of from four to five hundred feet.

Leaving Freshwater Gate, the corner of the precipitous cliff, now crowned with a military fortification, is soon turned, and we find ourselves in Walcombe Bay. Here, at the base of the cliffs, worn away by the action of the waves, are many dark caverns, some of considerable extent, one of which is still known as "Lord Holmes Parlour," the legend being that a nobleman of that name, formerly Governor of the Island, was wont to entertain his friends in its gloomy recess. At first but few birds are seen, only a pair of herring-gulls and a company of jackdaws are sailing about in the air near the summit of the lofty cliff. Presently a kestrel hawk, followed by its mate, is seen making for a hole in the chalk where its young are clamouring for food. Numbers of these birds breed all along the cliffs of the Island from the Culvers

to the Needles, and may often be seen hovering almost motionless in mid-air in search of prey. Now a cormorant, known locally as an Isle of Wight parson, flies by, with its long neck stretched out; and large numbers of daws may be seen hovering about their nests in the holes of the cliff. Here and there, where the chalk is somewhat less precipitous, narrow shelves and ledges covered with green herbage break the vast expanse of whiteness, and here many interesting plants manage to exist and thrive. In one place, not fifty feet above the waves, a small patch of deep purple catches the eye. It is a clump of the rare and beautiful sea-stock, growing on the face of the cliff, and giving a charming touch of colour to the scene. Farther on, covering perhaps half an acre of the shelving surface of the cliff, on which some rabbits are scuttling about, a mass of yellow charlock is seen; and lower down some exquisite patches of pink thrift, within reach of the splash of the waves. After about an hour's rowing, as one draws near the "Wedge Rock," the birds become more numerous. Numbers of herring-gulls, the only species of gull which breeds at Freshwater, are now seen whirling about in all directions, casting their shadows

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on the face of the cliff, and uttering their weird cries, which can be distinctly heard above the noise of the waves. Here and there, dotted against the white surface of the chalk, small patches of still purer whiteness, white as the driven snow, catch the eye. These are the herring-gulls sitting on their beautifully marked eggs, which they have deposited on the narrow ledges of the cliff, and whose glossy plumage makes even the dazzling chalk look dull. One bird has laid its eggs beside a patch of rosy thrift, against which it is leaning its snow-white breast. As yet only the breeding places of the gulls have been passed, with here and there a colony of jackdaws and a few solitary nests of stockdoves and kestrels, when suddenly a flock of guillemots fly out to sea, followed by a couple of puffins, or sea-parrots. The appearance of these curious, foreign-looking birds, when seen for the first time, is very striking, their enormous orange beaks, seemingly out of all proportion to the size of their little fat bodies, their red legs, their peculiar mode of flight, resembling that of a covey of partridges, the knowing expression of their painted faces distinctly seen as they fly close past the boat, or bob up and down not a hundred yards

distant, like corks upon the waves, all combine to give character to these jolly little birds. Yarrell says that comparatively few puffins breed in the Isle of Wight; this, however, is not the verdict of the local fishermen, nor the experience of the writer in his visits to their haunts. Hundreds of them might now be seen, flying out to sea in companies of ten or twenty, floating by dozens on the stormy waves, or sitting upright on their solitary eggs in long rows on the ledges of the cliff. Just above the Wedge Rock a colony of black cormorants have established themselves. Their huge nests, "large as a wheelbarrow," as the fishermen expressed it, composed of sticks, coarse grass, and masses of seaweed, could be seen some four hundred feet up the cliff. One nest contained young, and it was a fine sight to watch, through the glasses, the old birds, feeding their newly hatched offspring, whose long, snake-like necks, twisting about in every direction, were clearly visible from below.

Beyond the Wedge Rock, a detached mass of chalk, known among the fishermen as the "Old Pepper Rock," rises abruptly from the sea. Here the shags had taken up their quarters. These birds, which are sometimes confused

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with the common cormorant, may easily be recognized by their prevailing green colour and by their smaller size, but the eggs of the two species are so alike that it is almost impossible to distinguish them. It is curious to notice how each species of sea-fowl keeps to its own position on the cliffs. The guillemots occupy one station or line of ledges on the rock, the razorbills another, the puffins a third, while higher up still are the breeding-quarters of the herring-gull. Even the shags and cormorants keep to themselves. Not a cormorant was breeding on the "Pepper Rock": the shags had the spot entirely to themselves.

The scene beneath the "Main Bench," above which stands the "Tennyson Beacon," was indeed a striking one. The cliffs rise sheer from the water's edge to the height of six hundred feet, and here myriads of seafowl were breeding. The face of the cliff was literally lined with birds. At the report of a gun thousands left their stations; gulls, shags, cormorants, puffins, razorbills, guillemots, were everywhere screaming around; the very air was darkened with the multitude of birds. But even this unusual sight did not exhaust the interest of the scene. As

we were watching the birds returning to their ledges on the cliff, a loud hoarse croak arrested our attention. It was unmistakably the voice of a raven, whose cry of "Corpse, corpse!" is utterly unlike anything else in nature. Yes, there was the bird of ill-omen, soaring near the summit of the cliff and loudly croaking as it flew. Formerly the sight of a raven was common enough in England; almost every parish had its "raven-tree," where from time immemorial the bird had nested: now the lofty cliffs at Freshwater are one of the few remaining spots in the South of England where the raven may be seen. Here they have bred for centuries and here throughout the year a pair always remains. In winter they are almost the only occupants of the cliffs. The seafowl leave in August, as soon as the young birds can fly, and do not return till the early spring, when the guillemots first make their appearance. But the ravens never desert their ancient haunts; winter and summer alike they may be seen by those who understand their ways, tumbling about in the air, or sailing off somewhere in the neighbourhood of Freshwater. The ravens remain, and with the ravens the peregrine falcons. For

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centuries these splendid birds, now becoming rarer and rarer, have had their eyrie in the cliffs. This season they selected as their nesting-place a large cavern in the chalk about four hundred feet above the waves. From the boat the entrance looked a mere hole, hardly large enough for the birds to enter, but in reality a man could stand upright in it. And there sat the noble bird; with the glasses she was distinctly visible, sitting on a crag of chalk, and looking out over the sea.

In order to obtain the eggs of the wildfowl which frequent the cliffs, it is necessary to descend by means of a rope from the downs above. It is a dangerous proceeding, and has caused the loss of many lives. Formerly the trade was a fairly lucrative one, but of late years it has fallen off, and now but few fishermen care to follow it.

In addition to the sale of birds' eggs, which seem to have found a ready market in London at the rate of half-a-crown a dozen, there was also in former days a considerable trade in samphire. This plant still grows in abundance on the sloping ledges or terraces which break the otherwise perpendicular face of the chalk cliffs, but the demand for it has

almost entirely disappeared. This "dreadful trade," as Shakespeare calls it, was, even fifty years ago, a regular part of the summer's occupation of the fishermen. The samphire, when gathered, was cleaned and sorted and placed in casks with salt water, and then consigned to certain wholesale houses in London, who paid for it at the rate of four shillings a bushel. For smaller quantities the charge for collecting was one shilling per gallon. The samphire, we are told, was considered in perfection when just about to blossom towards the end of May, and the gathering lasted several weeks, as the plants came successively into flower. Formerly samphire-pickle used to be considered a great delicacy in the Island, and sometimes the herb minced was served up with meltedbutter instead of caper-sauce. But now, the fishermen tell you, samphire is seldom asked for.

The shelves or ledges on which the samphire grows are known among the cliffsmen as "meads" or "greens." Some of them are of considerable extent. One of the largest goes by the name of Rose Hall Green, and is perhaps an acre in extent. Unlike all the others, this "green" is accessible from below,

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though only in exceptionally calm weather, as the surf caused by the almost constant swell is very heavy on the rocks when there is any wind. In common with all the rest, it is covered with a dense growth of vegetation, the influence of the sea air in giving what Dr. Bloomfield calls "bulk and obesity" to the plants being very remarkable. Some of the leaves of the wild beetroot, called by the poor people "wild spinach," large tufts of which cover the ground, are considerably thicker than a penny. Samphire, of course, abounds in immense quantities, together with great bushes of the wild carrot, and a gigantic form of Hieracium pilosella, the leaves of which are shaggy on both sides with long white silky hairs. Wild cabbage, the yellow flowers of which are so conspicuous on the white cliffs at Dover in early summer, is not now found here, though the old herbalist, Matthias de Lobel, spoke of it as plentiful at the close of the sixteenth century.

It is strange how animals manage to exist in these inaccessible places. Rabbits abound in large numbers, and one year Rose Hall Green swarmed with rats. Sheep, too, wander from the downs above on to these "meads" and terraces, where they will

sometimes remain for weeks together. Occasionally, however, they are unable to return, and will then be shot by fishermen from a boat below. One poor creature we noticed, four hundred feet up the cliff, crouching in fear on a narrow ledge, and unable to move either way. A few years ago, one farmer lost as many as thirty-two sheep in this way in a single season: now boys are usually employed to prevent them from straying over the edge of the cliff.

In addition to the Picris broomrape, which flourishes on Rose Hall Green, many other rare and interesting plants are found in the Isle of Freshwater. We have already mentioned the purple sea-stock as growing on the face of the white chalk in Watcombe Bay. On the other side of Freshwater Gate, on the ledges of the perpendicular cliff under Afton Down, this beautiful plant grows abundantly. The fishermen call it the "gillyflower," and are fully aware of its rarity. This plant is the parent of the cultivated stock, but the delicious fragrance of its deep purple blossoms, especially of an evening, far surpasses that of the garden flower. On its native cliffs the seastock is of perennial growth, and splendid bushes of it may be seen, which must certainly

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have survived several winters. Down the warren which descends into Alum Bay wild flowers are plentiful. The brilliancy of their hues almost equals the gorgeous colouring of the famous cliffs. There are masses of blue forget-me-nots, and yellow cinquefoil, and white bedstraw, and purple bugle. But more interesting than any of these is a little prostrate plant, with inconspicuous flowers, which is especially luxuriant at the mouths of the rabbit-burrows. The plant is Erodium maritimum, or the sea stork's-bill, a scarce member of the geranium tribe, to be found here and in one other neighbouring locality only (where also the rare butterfly known as Melitæa cinxia is met with) in the county of Hants. A tufted form of the well-known centaury, which here and there is putting forth its lovely pink blossoms in the sunlight, will be recognized by a botanist as rare and local. Strolling back to Freshwater Gate over the glorious downs, where, as Lord Tennyson used to say, the air is worth sixpence a pint, but few rare plants will be noticed. On one spot, however, the charming little dwarf orchis may be found. Its specific name of ustulata is most appropriate, for the dark purple of the upper buds, as contrasted with

the milky whiteness of the expanded flowers, gives the spike the strange appearance of being burnt or scorched. It blossoms towards the end of May, and once seen will never be forgotten. It is curious how many of the down plants love to grow within a few feet of the edge of the cliff. In places the margin of the down is bordered with flowers, while ten yards away there is only the green turf. The bright yellow petals of the rock-rose are making a brave show beside the white blossoms of the English stonecrop, and the purple flower of the mallow. Several fine plants of the common horehound, the leaves of which are white with woolly down, are standing sentinel over a large patch of English scurvygrass; while just over the edge of the cliff, but visible from the down, the lovely flowers of the sea pink are waving in the wind.

#### CHAPTER XXIII

#### SOME CHANGES IN BIRD-LIFE

A COMPARISON of the bird-life in England to-day with what it was in former years is one of unusual interest. The comparison, it is true, cannot be extended, beyond comparatively modern times. For though we meet with allusions to birds in many ancient records-in books on falconry, in "household books" (such as the Northumberland "household books" and that of the L'Estrange family in the days of Henry VIII), in Shakespeare and other poets, in letters and papers such as those of the famous physician, Sir Thomas Browne of Norwich—yet, except in the case of well-known species, the identification is not always clear and satisfactory. There is, of course, the Ornithology of Francis Willughby, edited after his untimely death by his friend John Ray, which appeared in 1676, and which contains references to English birds; but the work deals generally "with all the species hitherto known." It was not till the year 1761 that Pennant's British Zoology was published, the second

volume of which treats of "British Birds." Thomas Pennant, it will be remembered, was Gilbert White's friend and correspondent, and in his preface he gratefully acknowledges the information he received from the naturalist of Selborne. A few years later, in 1788, appeared White's own immortal Natural History of Selborne, in which village it might almost be said that the study of British ornithology took its rise. This book was the result of forty years' unwearied observation; White began his Garden Kalendar in 1751, and so carries us back to the middle of the eighteenth century. In 1797 Bewick published the first volume of his History of British Birds, a work still prized for the accuracy and beauty of its illustrations. The early years of the nineteenth century saw the appearance of Colonel Montagu's Ornithological Dictionary, followed in 1813 by his Supplement. Twenty years later Selby produced his admirable Illustrations; and in 1837 Yarrell began the publication of his History of British Birds. The third edition of this work, which appeared in 1856, contains the descriptions of no less than eighty-three species not mentioned by Montagu. Among other books bearing on ornithology, which

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belong to the earlier years of the last century, may be mentioned Gilpin's Forest Scenery (which contains much interesting information with regard to the birds of the New Forest), Colonel Peter Hawker's Diary and Instructions, and the Sporting Journals of the second Earl of Malmesbury, which range from 1798 to 1840. These latter works, it will be noticed, as well as Gilbert White's History, all deal with the ornithology of Hampshire.

Now, since the days of Gilbert White and of Colonel Montagu great changes have passed over the face of the country which have seriously affected the distribution of birds. These changes are due to various causes, such as the drainage of the fens, the enclosing of commons, the growth of towns, and the extension of railways. Kingsley's famous lament over the past glories of Whittlesea Mere will recur to many: "Little thinks the Scotsman, whirled down by the Great Northern Railway from Peterborough to Huntingdon, what a grand place, even twenty years ago "-the words were written in 1867 —" was Whittlesea Mere, where dark-green alders and pale-green reeds stretched for miles round the broad lagoon, where the coot

clanked, and the bittern boomed, and the sedge-bird, not content with its own sweet song, mocked the notes of all the birds around; while high overhead hung, motionless, hawk beyond hawk, buzzard beyond buzzard, kite beyond kite, as far as eye could see. Far off, upon the silver mere, would rise a puff of smoke from a punt, and then overhead rushed and whirled the skein of terrified wild-fowl. screaming, piping, clacking, croaking, filling the air with the hoarse rattle of their wings, while clear above all sounded the wild whistle of the curlew and the trumpet note of the great wild swan. These are all gone now. Gone are ruffs and reeves, spoonbills, bitterns, avocets; the very snipe, one hears, disdain to breed." The passage may be, perhaps, somewhat highly coloured, but it describes in a graphic manner the changes which followed the draining of the great fen. And so with other vast stretches of marsh land, such as the fens of Cambridgeshire and Lincolnshire, of Holderness in the East Riding of Yorkshire, and of Prestwick Car in Northumberland. once the haunt of numberless water-fowl and the home of many rare species, now converted into corn-fields and grazing ground, where-

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All the land in flowery squares, Beneath a broad and equal-blowing wind, Smells of the coming summer.

And as with the fens and marshes, so with the extensive stretches of common land which formerly existed in England. In some counties these commons extended for miles. It was possible, for instance, to ride from Cawston to Norwich, a distance of thirteen miles, without once leaving the turf. In Lincolnshire, too, they were very extensive, and each common, we are told, had its own pair of hen-harriers; even in Essex, until quite modern times, many of the roads were bordered with wide stretches of grass and rank herbage. These commons and wayside wastes have now to a great extent been enclosed and converted into arable land, with the natural result that many choice birds are gone. The great increase of population, with the consequent growth of towns, has also seriously affected the bird-life of the country; while in one instance a railway actually runs through the centre of what was formerly a famous decoy. To these causes, which have so conspicuously interfered with "the old order" in the distribution of birds, must also be added the "preserving" of game and the

comparatively modern craze of egg-collecting. Our larger birds of prey have almost disappeared before the gun and trap of the gamekeeper, while the greed and selfishness of the egg-collector are responsible for the diminution almost to extinction of some of our rarer species. He has driven the ruff before its time from its last haunt in the British Isles; he has reduced the number of white-tailed eagles to two or three breeding-pairs on some outlying islands in the Shetlands; he seldom allows the honey-buzzard to rear its young in peace in the New Forest, or Montagu's harrier on the heaths of Dorsetshire, or the peregrine falcon on the cliffs of Freshwater. He has banished the beautiful little bearded tit from the dense reed-beds of many a Norfolk broad.

But nowhere is the contrast between the bird-life in England to-day and that of former times more conspicuous than in the almost total disappearance of the larger birds of prey. In the olden times, when falconry was the sport of kings, all kinds of hawks were protected, as pheasants and partridges are to-day. No hawk's nest was allowed to be taken, and buzzards and kites, as well as "noble" peregrines, reared their

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young in peace. Indeed, in mediæval England the kite must have been a specially familiar object alike in town and country. It was protected not only for the sport it showed when pursued by falcons, but also as a scavenger, and was to be seen in all large towns, except where the raven took its place. A traveller who visited England in 1461 remarks in his journal that nowhere had he seen so great a number of kites as in London, and that the birds were so bold as to snatch bread from the hands of children in the streets. It was equally common in country districts, where it played great havoc in the poultry yard. An interesting illustration, clearly the result of observation, occurs in one of the sermons of the famous Puritan preacher, Stephen Marshall, who held a living in Essex in the days of the Commonwealth. He tells us "how the Evil One lies in wait for the souls of men, and carries them off one after the other to perdition, even as a kite harryeth the brood of a hen, and leaveth none remaining." Even a hundred years ago the kite was not uncommon in Essex; it bred regularly in the great woods near Hempstead, and doubtless in Marshall's old parish of Finchingfield. There are several

allusions to it in Gilbert White's writings and in Lord Malmesbury's sporting journals. Gilpin speaks of it in 1834 as "one of the most harmonious appendages of the New Forest"; and as late as 1864 it seems to have nested in the county of Hants. But with the increased preservation of game the days of the kite were clearly numbered; and now this splendid bird,

That swims sublime In still repeated circles, screaming loud,

once the commonest of our birds of prey, is exterminated in England, while a few pairs only manage to maintain a struggle for existence in the wildest parts of Wales. And what has happened in the case of the fork-tailed kite has, to a great extent, taken place with other species of rapacious birds. Sparrow-hawks and kestrels, indeed, are common, but hen-harriers no longer breed as in the days of the second Lord Malmesbury, "in great numbers yearly on Poole Heath"; neither do "the moor-buzzards commit great havoc among the wild-fowl at Heron Court." The honey-buzzard has altogether deserted its ancient haunt on Selborne Hanger; and the peregrine falcon has ceased to harass the teal on the Moor's river. And with the

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larger hawks has disappeared the bird of ill omen. In former years the hoarse croak of the raven was a familiar sound in the country, and nearly every parish had its "raven tree." It is now almost as scarce as its relative the chough, which in White's time "abounded on Beachy Head and on all the cliffs of the Sussex coast."

When Bewick engraved his well-known plate of the bustard with two greyhounds and a sportsman in full pursuit, that grand bird was nearing the end of its existence in England. In mediæval times it seems to have inhabited all the undulating plains and wolds from the British Channel to the Firth of Forth. In the seventeenth century Sir Thomas Browne speaks of it as "not infrequent" in Norfolk, and Ray mentions it as inhabiting "Newmarket and Royston Heaths." Later on, an advertisement in Addison's Spectator for March 4, 1712, states that on the property of Heyden in Essex was to be found "game in great plenty, even to the Bustard." Towards the end of the century we learn from Gilbert White that the birds were occasionally to be seen "between Andover and Winton," and that "at a distance they resembled fallow deer." But with the

dawn of the nineteenth century Colonel Montagu tells us that the bustard was "almost extinct, except upon the plains of Wiltshire, where it has become very scarce." A few years later it was gone from Salisbury Plain; though a few birds managed to linger on in Norfolk and Suffolk until about 1838.

But if we have lost some of our larger species, other birds have become commoner than in former years. There is a compensatory principle continually at work throughout nature. "If a marsh is drained and subjected to the plough," as Lubbock truly says, "the call of the partridge is substituted for the cry of the lapwing and the snipe; if the same is planted, the wood-pigeon, the jay, the missel thrush, the pheasant, and various others, creep in to fill up the vacuum, which 'nature abhors.'" The bustard, alas! is gone, and many of our larger birds of prey. The black grouse, formerly found on the wide heaths and commons of the south of England, has now in those parts become extremely scarce. The beautiful bittern, at one time a regular breeder in the fens, is now only an occasional winter visitor. And with the bittern has gone, in consequence

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of the same draining of the fenlands, the black tern, the godwit, the avocet, and the Savi's warbler. But other species have increased. The cirl bunting and the garden warbler are common enough at Selborne to-day, though they are not mentioned by Gilbert White. When Bewick published his admirable work he seems to have considered the missel thrush a rare bird. It cannot be said to be so now. As instances of this principle of compensation which pervades all nature. Lubbock in 1845 mentions the great increase in Norfolk, owing to "the taste for planting which had arisen of late years," of the turtle-dove, the ring-dove, the goatsucker, the crossbill, and of the smaller birds generally. In White's time the hawfinch was clearly an uncommon bird; "three of them," he tells us, "once appeared in my fields in the winter"; and indeed, it was not known to breed in England until Mr. Doubleday found its nest in Epping Forest about the year 1830. Yarrel frankly admits that personally he was hardly acquainted with the bird, having never obtained more than a momentary glimpse of it. Now it breeds regularly in many of the home counties, and can no longer be called a rare bird. In my

own garden, situated not many miles from Selborne, it often plays great havoc among the green peas in summer time.

A variety of causes have combined to favour the increase of our smaller birds, which in former years must have been terribly harassed by the numerous birds of prey. The hedgerows and plantations which followed the Enclosure Act were doubtless another factor in their favour. Churchwardens, again, no longer pay threepence a dozen for "sparrarheads," which of course included those of any of the smaller birds. And there can be no doubt as to the excellent results which have followed the Wild Birds' Protection Act and the efforts of the Royal Society for the Protection of Birds. It is now generally admitted that, with the exception of the Dartford warbler, our smaller species are steadily on the increase throughout the country. A conspicuous instance is the goldfinch, of which beautiful species I counted thirty-six together one day last autumn on Badbury Rings, near Wimborne, and two pairs last year nested in my own garden Hampshire.

It is interesting to learn that, after the war of extermination which for many years had

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been waged against the golden eagle, the splendid bird, owing to the good sense of the landowners, is now decidedly on the increase in the Highlands of Scotland. Most interesting, too, is the report that a colony of the red-necked phalarope has lately been discovered in the north-west of Ireland, a country where before it was unknown. There also seems no reason to doubt that, as breeding species, the dotterel and the snow-bunting are both on the increase in Scotland. The woodcock now breeds regularly in many parts of England, and several kinds of ducks are spreading as breeding species in the southern and eastern counties. This is notably the case in the Essex marshes, where the nests of the shoveller may be seen every year. In one marsh, known as the Old Hall Marsh, in former years the site of a famous decoy, the pochard—"not known to breed with us," wrote Colonel Montagu in 1802—now remains to nest every spring. It appears that some thirty years ago a female bird, having been "winged" in the course of the winter, was unable to migrate with its companions when the spring season arrived. A gallant male bird remained behind with the cripple, and they successfully brought off their brood of

young. The next year a second pair stayed behind, and now some twenty couples of pochards breed regularly every spring on the Old Hall marshes.

#### CHAPTER XXIV

#### THE MIGRATION OF BIRDS

Among the many wonderful phenomena of bird-life, there is none more mysterious than that of migration. For thousands of years with unerring regularity, this migration, at certain fixed seasons, has been going on, and from very early times has aroused the wonder and astonishment of mankind. Of late years, much attention has been given to the subject by distinguished observers, both at home and abroad, and a considerable amount of information has been gathered together. Among those ornithologists who have made the question of the migration of birds peculiarly their own, a foremost position must be assigned to Herr Gätke, of Heligoland, who died in 1897. For over fifty years he gave to the subject his keenest attention, on a spot which, from an ornithological point of view, is literally without a rival in the whole world. The result of his observations, carried on at all seasons, by night and by day, with little interruption, for more than half a century, he gave to the world shortly before

his death in a work of considerable value and interest, entitled *Heligoland as an Ornithological Observatory*. It is proposed, in the present paper, to relate some of the marvellous facts recorded in that fascinating volume.

The little storm-swept rock of Heligoland, about one mile long, by one-third of a mile broad, is situated, it will be remembered, in the North Sea, some forty miles from the mouth of the Elbe, and about three hundred and twenty from the east coast of England. Lying in the direct line of the flight of migration, it affords unique facilities for observation. Though but few birds, with the exception of the gulls and guillemots, stay to breed on the bare and rugged isle, yet this loss, says Herr Gätke, is more than compensated by the extraordinary and unexampled grandeur in which the phenomena of migration are displayed.

The two great periods of migration are, of course, spring and autumn, when the number of birds which pass over Heligoland is altogether beyond human calculation. Hooded crows travel in never-ending swarms of hundreds and thousands across the island; cloud-like masses of larks and starlings pass

at the same time. On one dark night, in the autumn of 1868, no less than fifteen thousand larks were caught round the lantern of the lighthouse in the space of about three hours; and this number, says Herr Gätke, does not even approximately express a proportion of one for each ten thousand individuals which must have formed part of that enormous cloud of migrants. It is on still, dark nights towards the end of October that the migration of birds, as revealed by the light of the lighthouse, sometimes reaches its grandest and most attractive development. The whole sky is filled with a babel of hundreds of thousands of voices, many of them entirely unknown to the gunner; while "under the intense glare of the light, swarms of larks, starlings, and thrushes career around in ever-varying density, like showers of brilliant sparks, or huge snowflakes driven onward by a gale, and continually replaced as they disappear by freshly arriving multitudes. Mingled with these birds are large numbers of golden plovers, lapwings, curlews, and sandpipers. Now and again, too, a woodcock is seen; or an owl, with slow beatings of the wings, emerges from the darkness into the circle of light, but again speedily vanishes,

accompanied by the plaintive cry of an unhappy thrush that has become its prey." Such a migration stream lasts through a whole long autumn night, and, under favourable conditions, may even be repeated for several nights in succession. Year after year the migration proceeds on the same enormous scale, and the term "clouds of migrants" is alone capable of conveying any adequate impression of the vast flocks of birds which rush across the islands. It may seem incredible that the golden-crested wren should be capable of crossing the North Sea, and yet these tiny birds regularly perform their migration, sometimes in immense numbers. On the night of October 28, 1882, such a migration took place. Perhaps, says Herr Gätke, the simile of a snowstorm may help to convey an idea of the scene. From ten at night till daybreak the birds sped steadily from east to west past the lighthouse, appearing under the bright glare of the lantern like so many real snowflakes driven by the wind. By daybreak the whole island was literally covered with gold-crests, but by ten o'clock in the morning the majority had proceeded on their journey. A migration of golden-crested wrens on such an enormous

scale may well fill us with amazement, but even more wonderful is the vast number of birds of prey which occasionally cross the island. One day, in the autumn of 1858, an immense migration of honey-buzzards took place. From three o'clock in the afternoon until six in the evening, the migration proceeded in one incessant stream. Flocks of fifty, eighty, or even larger numbers followed one another in uninterrupted succession, appearing on the horizon on the east of the island, and disappearing from view in the far west. The weather was beautifully calm, and "one might almost fancy that he heard the rustle of their wings, though the mighty horde of wanderers passed on their way silently at a great height above." Extensive as are the breeding-stations of the honey buzzard in the vast forests of European and Asiatic Russia, the question still remains, to which no adequate answer can be given, "Whence comes this enormous multitude of birds of the same species; and by what means do they congregate together for purposes of migration on one and the same day ? "

Although spring and autumn are the two main periods of migration, yet, to a greater

or less extent, the movement continues throughout the year. Early in January, the guillemots, in flocks of thousands, pay occasional visits to their breeding-places on the rocky slopes of the cliff, and, if the weather be favourable, a few skylarks and starlings appear. Towards the end of February, flocks of missel-thrushes regularly pass over. With March, bird-life becomes more animated; stonechats are daily seen; large flocks of snow-buntings make their appearance, together with finches, blackbirds, thrushes, wagtails, woodcocks, and various other birds. April the stream of migration increases; the gardens are alive with warblers, and thousands of hooded crows continue to pass overhead. In May the spring migration reaches its maximum. Vast hosts of wanderers sweep past, without resting, to their far-off breeding-places, while tens of thousands break their journey, and make a few hours' stay on the island. It is, however, absolutely impossible, says Herr Gätke, to ascertain the manner of arrival of most of these visitors, even by the most careful observation. is specially the case with the small song-birds and similiar species, whose number increases with each minute, without one being able to

see a single bird descending from on high, or shaping its course in any one particular direction. Many alight on the fields while it is still dark, and are present in their thousands by the time it has become daylight; some, on the other hand, arrive shortly before sunrise; others, like the whin and stonechats, arrive only after day has fully From this time onwards their number increases steadily, and in so striking a manner that, by ten o'clock in the morning, all the pastures, fields, and gardens, and even the rubble at the foot of the cliff, teem with them. In June a few rare strangers are usually met with, but by the middle of the month the stream of migration may be said to have completely ceased.

Before long, however, the first indication of the reflux of the migration wave appears. This is the arrival of the young starlings, who during the month of July make their appearance in large numbers. These are followed by golden plovers, ringed plovers, ruffs, and dunlins, all the individuals, however, being young birds. Nothing is more remarkable among the phenomena of migration than this incontestable fact. It has been commonly assumed that the oldest and most experienced

birds travelled at the head of migratory flocks, to act as guides and leaders to the young. Observation, however, has undoubtedly proved that the exact opposite is the case. Out of the three hundred and ninety-six species which occur at Heligoland, the autumn migration, with one solitary exception, is initiated by the young birds from about six to eight weeks after leaving the nest. The only exception, and this for obvious reasons, is the cuckoo. Moreover, the old parent birds, so far from accompanying their young, do not follow until one or two months later; while the most handsome old males are the last to set out on the migratory journey. Such are the conclusions, incredible as they may seem, at which, after fifty years of close observation, our distinguished ornithologist arrived, and there is no reason whatever for doubting the truth of his assertions. In the case of many birds, as blackbirds, starlings, wheatears, golden plovers, whose adult plumage differs so markedly from that of the young birds, there is no room for deception, while in the case of others less strikingly distinguished, ample materials are at hand for determining each fact with perfect accuracy.

In August and September the phenomena of migration are again seen in all their grandeur, while the month of October brings to the shores of Heligoland the largest number of birds of any period of the year. Woodcocks appear in large "flights," and no bird is held in higher esteem by the islanders than "De Snepp." To many of the residents the sale of these birds forms a considerable source of income, and all possible means are employed for their capture. Numbers are shot, while many are taken in large nets specially made for the purpose, and some are caught in the "throstle-bush." As an instance of the enormous number of these birds sometimes taken during the autumn migration, it may be mentioned that many years ago no less than eleven hundred woodcock were bagged in a single day, one gunner, named Hans Prohl, bringing down ninety-nine birds with an old infantry musket. On another occasion Herr Gätke saw over five hundred birds lying on the floor of a dealer's shop, all of which had been taken on the same day. In addition to woodcock, thrushes are caught in large numbers, and "Troosil supp" is considered one of the greatest of island delicacies. These birds are chiefly taken in

nets, and sometimes as many as five or six hundred have been caught by one fowler in a day. The short-eared owl, which is very common during the autumn migration, is also eagerly sought after for food, the birds being roasted, and not, like thrushes, larks, and plovers, assigned to the soup-pot or the stew-pan.

With the approach of winter the sea begins to present a striking and animated picture of bird-life. Thousands of sea gulls—the kittiwake, the common gull, the herring gull, the greater black-backed gull, the beautiful little gull-may be seen in every direction, together with skuas and petrels and red-throated divers. Should a sharp frost suddenly set in, crowds of birds which have tarried too long in their summer haunts -fieldfares, redwings, curlews, sandpipers -rush in one night towards their winter quarters; while, during the day, countless flocks of swans, geese, ducks, and mergansers are seen migrating across the sea. After several weeks of very severe frost the grandeur of the scene around Heligoland can hardly be exaggerated. As far as the eye can see, there stretches "a white, vast, and unbroken ice-field. In lee of its sharply defined margin,

a perfect calm prevails, and the smooth surface of the sea is covered with myriads of ducks in glossy black plumage. Closer in shore smaller species make their winter home, whilst farther off the handsome old males of the red-breasted merganser are swimming about in bands of from eighty to one hundred and twenty individuals. At the same time, countless multitudes of all sorts of species are seen speeding towards all parts and in all directions, in companies great and small, solitary and in pairs. Indeed," wrote Herr Gätke, "I have known days on which I have seen, far as the eye could reach, in all quarters of the sky, swarms of these birds crossing each other in all directions, and more astonishing still, on looking upward have beheld above me a teeming multitude, so thick that the highest swarms presented the appearance of scarcely discernible clouds of dust. In fact, the whole vault of heaven was literally filled to a height of several thousand feet with these visitors from the regions of the far North. Here flocks of the common scoter, in their green, glossy plumage, hasten, with rapid strokes of the wings; and there, crossing their path, approaches a company of twenty velvet

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scoters, in their deep black plumage set off by wings with spots of dazzling white. Even in the far distance, by their beautiful darkgreen heads and the peculiar round white spots between beak and eye, we are able to recognize the beautiful golden eyes as they fly hither and thither, alone or in companies. Scarcely has our eye been turned towards a long chain of prettily marked scaups, when a group of splendid creamy-red goosanders at once distracts our attention. Among all these are mingled, like swarms of insects, teeming clouds of lighter or darker brownishgrey females and young birds of all possible species. Nowhere does the quick observant eye find rest. Suddenly are heard-first faintly, then in increasing loudness-sounds like distant trumpet-blasts, and once more our eyes are attracted upwards, where a long chain of whooper swans, eighteen or twenty in number, in snow-white plumage, calmly pursue their way with measured beatings of the wings."

Leaving this strange and fascinating picture of bird-life, let us pass on to notice one or two points of interest in connexion with migration, on which our author throws considerable light. And nothing, perhaps, is

more astonishing than the great height at which the majority of birds make their migration passage. A few species, notably the hooded crow, the starling, and the lark, usually fly at a low elevation, a few hundred feet only above the surface of the sea. Strange to say, all these species migrate at a greater elevation in spring than in autumn, but during both periods, especially in dull windy weather, hooded crows and, still more markedly, larks frequently fly immediately above the surface of the water. Most species, however, travel at a considerable elevation, far beyond the range of the human eye. When starting on their journey, sparrow-hawks and kestrels will make their way upwards in a spiral course until they become totally invisible. In the case of song-thrushes, redbreasts, hedge-sparrows, golden-crested wrens, and many other species, one of the birds, soon after sunset, rises before the rest, whom it summons for departure with loud, clear call-notes. The remaining members of the band then congregate from all directions, and with breasts erect and brief and rapid strokes of the wings, rise almost vertically upwards, describing whole or half-circles at irregular

intervals. When the last straggler has joined the flock, the call-notes are silenced, and the tiny wanderers vanish out of sight. On one occasion Herr Gätke had the good fortune to witness the arrival of a large number of sparrow-hawks, which conclusively proved the immense height at which these birds make their migration flight. It was a fine afternoon in October, the condition of the atmosphere being favourable for observation, when, in company with "Old Oelk," a famous gunner, his attention was attracted by some descending hawks. "As their number kept continually increasing, we directed our attention," says Herr Gätke, "to portions of the sky where no birds were to be seen, and observed, after a long and strained look upwards, some scarcely discernible points which, after a short time, we recognized to be hawks." For the space of about an hour the birds kept coming into sight at a height which may be fairly estimated at not less than ten thousand feet, and then wheeling about in circles descended to lower altitudes

Not less remarkable than the height at which birds travel is the wonderful rapidity of the migration flight. We get a fair estimate

of this velocity in the case of the hooded crow. During the autumn migration large numbers of these birds travel past Heligoland. The first flocks arrive about eight o'clock in the morning, and are succeeded by flock after flock until two o'clock in the afternoon, all travelling, without interrupting their flight, in a westerly direction. And it may be taken as certain that the flights of these birds which appear on the eastern and disappear on the western horizon of Heligoland, are the same as those which arrive on the English coast from an eastern direction. Now, from the reports of the distinguished ornithologist, Mr. John Cordeaux, with whose observations Herr Gätke was in the habit of comparing his own, it appears that the first flight of hooded crows arrived on the east coast of England about eleven o'clock in the morning, and the last about five o'clock in the afternoon. We therefore find that those birds pass over three hundred and twenty miles of ocean which separates Heligoland from England in the space of three hours, thus giving a velocity of no less a rate than one hundred and seven miles an hour. Such a performance is the more remarkable when we remember that the

hooded crow is certainly a sluggish bird, and justifies us in assuming that in the case of birds more adapted for rapid motion, such as falcons and swallows and pigeons, the velocity of flight is far greater. Indeed, it has been calculated by Herr Gätke, on what seemed to him to be conclusive evidence, that the migration flight of the northern bluethroat, a little bird which regularly visits Heligoland, reaches the almost incredible speed of one hundred and eighty miles an hour. But it is probable that the flight of Pallas' sand-grouse, an Asiatic species, which visited Europe in large numbers in 1863 and again in 1888, is even more rapid still. It is such that no falcon would seem to be able to overtake it. The rapidity of their flight, says our author, is particularly remarkable in cases where large flocks cross the sea at a considerable distance from land; hardly have such birds approached within the vicinity of one's boat before they are again lost sight of on the distant horizon. I do not entertain the least doubt, he adds, that cases may have occurred in which they have crossed the North Sea between Jutland and England several times in one day.

Strange and inexplicable as are many of

the phenomena in connexion with the migration of birds, it may seem to many people stranger still that insects are often moved by the same irresistible impulse of migration. Not infrequently, a vast migration, in countless multitudes, of nocturnal Lepidoptera takes place. It has, in fact, occurred repeatedly, says Herr Gätke, that "Lepidoptera, especially the night-flying species, have passed over this island in countless swarms at the time of prolonged bird migrations." Thus, on the night of October 25, 1872, thousands of Hybernia defoliaria passed the lighthouse in company with large numbers of larks. The same thing was observed to happen during the night of October 11, 1883. Immense swarms of the common cabbage butterfly, of the black arches, above all, of the well-known Gamma moth (Plusia gamma), have been frequently known to pass over the island on migration. On one occasion, in August, 1882, the last-named moth, for four nights in succession, from 11 p.m. to 3 a.m., passed the lighthouse in millions, like the flakes of a dense snowstorm. At the same time immense numbers of Plusia gamma were observed by Mr. John Cordeaux on the east

coast of England; and there can be no reasonable doubt that these small creatures managed to cross the North Sea in safety.

Such are some of the marvellous phenomena of migration, which unfold themselves year by year on the little island-rock of Heligoland. Many indeed are the theories which seek to account for this or that phase in the great movement of migration; but with regard to the main question, it may be said that we are still confronted with a problem which has hitherto defied every attempt at solution. After fifty years of close and untiring observation, Herr Gätke came to the conclusion that at present we are furnished with no clue whereby we are enabled to penetrate the depths of the mystery of migration. "The life of man," he added with a sigh of pardonable regret, "is too short for the complete exploration of this inexhaustible field, and one can only regret that one is unable to start afresh with observations and inquiries from the standpoint which one has reached at its close."

# CHAPTER XXV

#### THE BIRDS OF DANTE

It is impossible to read the Commedia in the most perfunctory manner without being struck with the divine poet's marvellous faculty of observation. His eye is everywhere. He notices every passing phase of nature. The minutest details of natural history are made use of in the composition of his poem. The fire-flies, or perhaps glow-worms, flitting to and fro in the twilight of a summer's evening; the frogs escaping from the water-snake on to the bank, or croaking in a pool with only their heads visible; the lizard darting like a lightningflash from hedge to hedge; the snail drawing in its horns; the dolphins arching their backs before a coming storm; the ants meeting in the way; the bees busy among the flowers-all are noted with the eye of a naturalist, and furnish the poet with some apt similitude. Or, take his picture of the sheep in the third canto of the Purgatorio, the most perfect passage of the kind in the world, as Lord Macaulay thought it, the most

picturesque and the most sweetly expressed. Or his description of forest scenery in the twenty-eighth canto, of which Mr. Ruskin says that "the tender lines which tell of the voices of the birds mingling with the wind, and of the leaves all turning one way before it, have been more or less copied, by every poet since Dante's time. They are," he adds, "so far as I know, the sweetest passage of wood description which exists in literature."

We find in the *Commedia* some thirty-seven ornithological allusions: of these, ten occur in the *Inferno*, sixteen in the *Purgatorio*, and eleven in the *Paradiso*. Dante mentions fourteen different species of birds, if we may reckon his reference to Christ as the mystic Pelican.

The most striking, as well as the most numerous, of Dante's bird-similitudes are those which he draws from the art of falconry. The sport was exceedingly popular in Italy and throughout Europe in the thirteenth century. The elaborate treatise of the Emperor Frederick II is striking evidence of the favour in which it was held. That Dante was intimately acquainted with every detail of the art may be taken as beyond dispute. Some ten times he alludes to it in the Commedia,

and in a manner which marks an enthusiast in the sport. Take this picture of a falcon, unable to find its prey, and returning tired and sullen—

E'en as a falcon, long upheld in air, Not seeing lure or bird upon the wing. So that the falconer utters in despair: "Alas, thou stoop'st!" fatigued descends from high. And whirling quickly round in many a ring, Far from his master sits—disdainfully.

Inf., xvii, Wright.

Or this, baffled by the diving of a wild-duck—

E'en thus the water-fowl, when she perceives The falcon near, dives instant down, while he Enraged and spent retires.

Inf., xxii, Cary.

And a few lines further on, the falcon, furious at the escape of the water-fowl, turns his talons on his comrade—

O'er the dyke

In grapple close they joined; but the other proved A goshawk, able well to rend his foe, And into the boiling lake both fell.

What species of hawk Dante intended by "sparvier grifagno" it is impossible to determine; the "goshawk" of Cary is, of course, only a guess: it seems probable that the terms falcon and sparvier were used by the poet indiscriminately. In illustration of the above passage, the following story, told by Mr Harting, may be quoted—

In October, 1172, Henry II was at Pembroke, en route for Ireland, where, says Giraldus Cambrensis, he amused himself with the sport of hawking. He chanced to espy a noble falcon perched on a crag, and making a circuit round a rock, he let loose upon it a large highbred Norway hawk, which he carried on his left wrist. The falcon, though its flight was at first slower than the other bird's, having at last mounted above it, became in turn its assailant, and stooping from aloft with great fury on the Norway hawk, laid it dead at the king's feet.

In the second circle of Purgatory Dante sees the shades of the envious, clad in sackcloth, and leaning blind and helpless against the cliff—

For, through the orbs of all, A thread of wire, impiercing, knits them up, As for the taming of a haggard hawk.

xiii, 63-5.

This method of taming a "haggard hawk," i.e., a full-grown hawk taken "on passage," as distinguished from a young bird taken from the nest, was common in Dante's time, and is mentioned by the Emperor Frederick in his book on Falconry. It was known as seeling, and seems to have been a custom of great antiquity. It is often alluded to by Shakespeare, as in the well-known passage from Antony and Cleopatra—

The wise gods seel our eyes.

This method, now happily superseded by the use of a hood, was also practised in Ceylon.

Sir E. Tennant tells us that when the goshawk was trained for hawking, it was usual to "darken its eyes by means of a silken thread passed through holes in the eyelids."

It is impossible to quote all the passages in which Dante alludes to the art of falconry, but the following references may be consulted: *Inferno*, iii, 112-117; *Purgatorio*, xiv, 147; xix, 61-66; *Paradiso*, xviii, 42; xix. 34-36. In after years Dante seems to have regarded the time spent in falconry as little better than wasted. At any rate, he begins the twenty-third canto of the *Purgatorio*, with the lines—

On the green leaf mine eyes were fix'd, like his Who throws away his days in idle chase Of the diminutive birds.

Cranes are three times mentioned in the Commedia. In the second circle of the Inferno Dante sees the souls of carnal sinners driven with restless fury by the warring winds, and uttering their wailing cries—

#### As cranes

Chanting their dolorous notes, traverse the sky, Stretch'd out in long array; so I beheld Spirits, who came loud wailing, hurried on By their dire doom.

v. 46-50.

The cries of the lost reminded him of the loud clanging notes of the crane, which he

had often heard, sometimes at night, as the birds on their spring migration passed overhead to their northern breeding-places. An interesting parallel will be at once remembered in the famous lamentation of Hezekiah, where the king says, "Like a crane or a swallow, so did I chatter." The flight of cranes twice supplies Dante with a simile; once in the twenty-fourth canto of the *Purgatorio*, and again in the twenty-sixth, where, strange to say, his facts are not in accordance with nature. He represents the birds as migrating in opposite directions at the same period of the year, some to the Ural mountains, and some to the deserts of Africa—

As cranes

That part towards the Riphæan mountains fly, Part towards the Lybic sands, these to avoid The ice, and those the sun.

The error is curious as being the only instance in the *Commedia* of a bird-similitude not strictly accurate. It may be that Dante had in his mind, consciously or unconsciously, a passage from Virgil's *Georgics* (i, 240); but the more probable explanation seems to be that the sight of spirits moving in opposite directions suggested the simile, and he was not careful as to its scientific accuracy. While on the subject of the migration of birds, on

which careful observation has of late years thrown so much light, it is interesting to notice the following passage from Dante's canzone on Winter, which shows that the fact of migration was quite familiar to the poet. We quote from Dean Plumptre's translation—

Fled far is every bird that loves the heat From Europe's clime, where evermore are seen The seven bright stars that are the lords of cold; And others cease awhile their warblings sweet, To sound no more until the spring be green.

The stork, sacred in Europe as the robin in England, is several times mentioned by Dante. He had often seen their nests perched on the housetops, and on the towers and belfries of churches, if not in Italy, at least on his travels in Central Europe. Their habits furnish him with several similitudes. During the breeding-season they keep up an almost constant clappering with their bills. Dante had noticed this; and in the frozen circle of the *Inferno* he compares the chattering teeth of the shivering shades to the noise made by storks—

Blue-pinch'd and shrined in ice the spirits stood, Moving their teeth in shrill note like the stork. xxxii, 34.

In the *Purgatorio* Dante likens his desire for knowledge and at the same time his timidity in questioning his guide to that

of the fledgling longing to escape from the nest, and yet fearing to leave the housetop—

E'en as the young stork lifteth up his wing Through wish to fly, yet ventures not to quit The nest, and drops it. . . . xxv, 10-12, Cary.

While in the *Paradiso* (xix, 91-94) he notices the eager gaze of the nestlings as they look up at the parent bird—

Even as above her nest goes circling round The stork when she has fed her little ones, While they with upward eyes do look on her.

It is a moot question whether the stork nested in Italy in the thirteenth century. At the present time it seems to be of irregular occurrence, passing over the country at the spring migration, but never staying to breed there. This, however, cannot be due to climate, as it breeds freely in the parallel latitudes of Spain and Asia Minor. And it is quite certain that the stork bred in ancient Italy. In a most interesting article on "The Birds of Virgil," Mr. Warde Fowler quotes a passage from the Satyricon of Petronius, which is conclusive on this point. I venture to make use of his forcible translation. "A stork, too, that welcome guest from foreign lands, with its long, thin legs and rattling bill, the bird that is banished by

the winter, and announces the coming of the warm season, has made his accursed nest in my boiler." Further evidence to the same effect is furnished by the story told by Gibbon, on the authority of Jornandes and Procopius, that at the siege of Aquileia, in A.D. 452, Attila was encouraged to persist by the sight of a stork preparing to leave her nest in one of the towers, and to fly with her infant family towards the country. He seized, says Gibbon, "this trifling incident which chance had offered to superstition, and exclaimed, in a loud and cheerful tone that such a domestic bird would never have abandoned her ancient seats unless those towers had been devoted to impending ruin and solitude." It is, therefore, not improbable that the stork continued to breed in Italy as late as the thirteenth century, and that Dante's descriptions were the result of local observation. In France, owing to persecution, the stork is now only a migrant; the same cause may have produced a like result in Italy.

The Latin and Greek poets have many and beautiful allusions to the swan, which was once far commoner in Europe than it is now. Dante only mentions it once. As he and

Virgil are led upward to the fifth circle of *Purgatory*, his eyes are caught by the splendour of the angel's wings, which "like a swan's did shine." Starlings, too, are once mentioned. In the second circle of the *Inferno* are found the souls of sensual sinners whose punishment is—

To be imprisoned in the viewless winds, And blown with restless violence round about The pendent world.

Whirled in the stormy blast, their movements recall to the mind of the poet the flight of starlings in winter-time, when in large flocks they sweep across the stormy sky—

As in large troops
And multitudinous, when winter reigns,
The starlings on their wings are borne abroad;
So bears the tyrannous gust those evil souls.
v. 40-3.

In the eighteenth canto of the *Paradiso* we have another simile from the flight of birds; and again in the twenty-first canto, where the movements of the blessed are compared to those of rooks at break of day.

Dante's lines on the skylark are among the most beautiful in the *Commedia*. They occur in the twentieth canto of the *Paradiso*, where the souls of the righteous are represented as resting in "the sweetness of

contemplating the Divine righteousness, as the lark rests on the sweetness of its own song"—

> Like to the lark That warbling in the air expatiates long, Then trilling out his last sweet melody, Drops, satiate with the sweetness.

"All the verses that ever were written on the nightingale," says Landor, "are scarcely worth the beautiful triad of this divine poet on the lark. In the first of them do you not see the twinkling of her wings against the sky? As often as I repeat them my ear is satisfied, my heart, like hers, contented."

Another beautiful simile—in Mr. Lowell's estimation perhaps the most exquisite in all poetry—is that of doves in the fifth canto of the *Inferno*. It occurs in the well-known scene where Dante, at the command of Virgil, calls on the shades of Francesca and Paolo as they are whirled along in the infernal blast to stay if possible and speak. And then—

As doves

By fond desire invited, on wide wings And firm, to their nest sweet returning home, Cleave the air, wafted by their will along,

the sad souls draw near. To what particular species of pigeon Dante here alludes it is

impossible to speak with certainty. The description both here and in the twentyfifth canto of the Paradiso would seem to point either to the ring-dove or the stock-dove. It must, however, be allowed that the passage calls to mind the famous lines in the fifth book of the *Eneid*, where Virgil evidently refers to the blue-rock. And modern naturalists assert that the ring-dove and stock-dove, so abundant in England, seldom or never breed in Italy, being only seen on the spring and autumn migrations. But from certain passages in Virgil and Pliny it seems to be beyond question that in their time one or both species habitually nested in Italy. Had this ceased to be the case in Dante's days? If so, his colombo is perhaps the blue-rock; though the more probable conclusion seems to be that he used the word generally, without any thought or even knowledge of the different species. Once again, in the second canto of the Purgatorio, does Dante draw a simile from a flock of pigeons, perhaps here of wood-pigeons, feeding with their accustomed wariness in the corn-fields after harvest during the autumn migration.

Once only does Dante allude to the nightingale (*Purgatorio*, xvii) and once to the swallow

(Purgatorio, ix), in each instance with reference to the story of Procne and Philomela. Another classical allusion may be found in the opening canto of the same poem, where reference is made to the transformation of the daughters of the King of Thessaly into magpies—"wretched birds of chattering note." In the thirteenth canto Dante puts into the mouth of Sapia, a lady of Siena, whom he finds among the envious in the second circle, the following lines—

And like the blackbird, cheated by a gleam, Cried, "It is over, Heaven; I fear thee not!"

The words, says the late Dean Plumptre, "more or less analogous to our proverb that 'One swallow does not make a summer,' imply a fable. A blackbird had found shelter in a house during winter. When a fine day came at the end of January—such days are known in Lombardy as giorni della merla—he began to sing out, saying to his protector, 'Now, master, I care not for thee, for the winter is past.'" The reference to Christ as "our mystic Pelican" comes under the same category of allusions. The story of the pelican feeding her young ones with her blood is of considerable antiquity, but its origin is much disputed. The mystical

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interpretation of the passage in Psalm cii may have suggested the symbolism as applied to Christ. The allusions to the eagle in the *Commedia* are of course many, but they are either symbolical or classical. The bird of Jove is with Dante the symbol of Roman power, as with Ezekiel it had been that of Nebuchadnezzar. The grand similitude of the starry eagle of righteous souls, in which splendid constellation David occupied

That part which sees and bears the sun In mortal eagles,

need only be mentioned. The classical story of Ganymede is graphically made use of in the ninth canto of the *Purgatorio*. In the limbo of the unbaptized, Dante meets the great poets of antiquity; among them Homer—

The monarch of sublimest song, That o'er the others like an eagle soars.

As our last picture—in Dean Plumptre's estimation "perhaps the most beautiful in Dante's bird-gallery"—we have reserved the exquisite description of the bird waiting for the dawn in the opening lines of the twenty-third canto of the *Paradiso*. The following is Wright's translation—

E'en as the bird that resting in the nest

Of her sweet brood, the sheltering boughs among, While all things are enwrapt in night's dark vest—Now eager to behold the looks she loves,

And to find food for her impatient young (Whence labour grateful to a mother proves)

Forestalls the time, high perch'd upon the spray,
And with impassion'd zeal the sun expecting,

Anxiously waiteth the first break of day.

It is quite possible that this picture may have been drawn from nature; but, as the Dean has pointed out, interesting parallels may be found in Dante's favourite poets, Virgil and Statius.

In concluding this brief notice of the birds of Dante I desire to express my obligation to the article already alluded to, by Mr. Warde Fowler, on "The Birds of Virgil," to Dean Church's celebrated essay, and to the suggestive notes and studies by the late Dean Plumptre in his admirable volumes on The Commedia and Canzoniere of Dante Alighieri.



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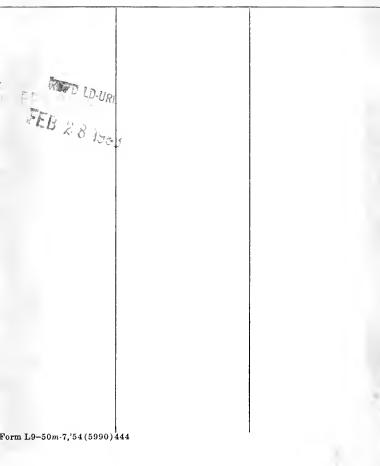
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